

## **Report on vital statistics and sanitary work for the year 1898.**

### **Contributors**

Paddington (London, England). Parish. Vestry.  
Dudfield, Reginald.

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Borough of Paddington.

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REPORT

ON

VITAL STATISTICS

AND

SANITARY WORK

FOR THE YEAR

1898,

BY

REGINALD DUDFIELD, M.A., M.B., D.P.H.,

*Medical Officer of Health.*

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TO THE CHAIRMAN AND MEMBERS OF THE  
VESTRY OF PADDINGTON.

GENTLEMEN,

I have the honour to present to you my Fifth Annual Report on the Vital Statistics and Sanitary Administration of the Parish of Paddington, being the Report for the year 1898.

The death-rate in 1898 (15·80), although higher than that of 1897 (14·33), was satisfactory. It would have been lower but for the occurrence of epidemics of measles in the Spring, and of Diarrhœa in the Autumn. Some effort was made to cope with the former, an account of the work being contained in pages 56—60 of this Report. Incomplete as this attempt was, its results I think encourage further efforts in the same direction. The expense involved in dealing with an epidemic of this character is usually put forward as a reason for not attempting any such work. The experience of last year does not point to the need of any large outlay, the additional expenditure involved being the wages of two temporary extra men for the disinfection of sick rooms, and some slight increase in the Contractor's account for purification of bedding, &c. Nothing has yet been attempted to limit the mortality from epidemic diarrhœa, beyond routine sanitary work. In 1895,\* I suggested that a leaflet on infant feeding might with advantage be issued through the medical staffs of the hospitals and dispensaries, registrars of births, district visitors, and others. Recent experience has shown that this disease is undoubtedly infectious, and can be transmitted directly from child to child by dirty fingers, &c. Some attempt should be made to educate the mothers, as by that means alone can any permanent benefit be secured.

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\* Annual Report, 1895, p. 100.

During the year an inquiry as to the causes of the larger number of deaths registered as due to "cancer," was commenced. Certain more detailed, but provisional, statistics are included under this head in this Report. The Reports of the Metropolitan Asylums' Board and the Water Examiner have not yet been published. I have therefore been unable to deal with the results of isolation of infectious disease, or with the water supply of the year. A special Report on Tuberculosis is in preparation, by direction of the Sanitary Committee.

The office accommodation becomes more insufficient year by year, and considerable inconvenience is experienced from the want of a private room for the reception of callers desirous of discussing medical or other confidential matters.

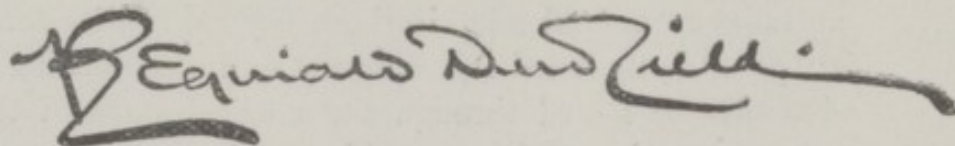
All the Members of the Permanent Staff of the Department, which has remained unchanged during the year, have worked well, and to my satisfaction.

I am pleased to be able to record that I have always secured the co-operation of the Medical Profession practising in the District. My thanks are due, and are heartily rendered, to the Sanitary Committee for their cordial sympathy and support.

I have the honour to be,

GENTLEMEN,

Your most obedient servant,



M.A., M.B., D.P.H.,

*Medical Officer of Health.*

VESTRY HALL,

HARROW ROAD, W.

June, 1899.



## POPULATION.

Working on the assumption that the rates of change observed in the populations of the two sub-districts, during the five years 1891-96, continued unvaried, an estimated population of 127,678 for the whole Parish at the middle of the year 1898 was arrived at, as compared with a total of 117,846 at the census of 1891, and of 124,506 at the enumeration of 1896. The population (1898) of North Paddington (St. Mary's Registration Sub-District) was estimated at 94,248 persons, and that of South Paddington (St. John's Registration Sub-District) at 33,430. Owing to the long interval which has elapsed since the last census, and to the great changes which are taking place in the manner of housing the inhabitants of the district, these estimates must be regarded as provisional only, and subject to revision when the results of the next census are available.

The natural increment of the population, *i.e.*, the excess of births over deaths, amounted to 935 individuals during 1898, as compared with 1,210 in 1897, 1,126 in 1896, and 880 in 1895. The annual average for the preceding decennium was 978. These figures take no account of immigration or emigration, and are naturally dependent on the annual fluctuations in the natality and mortality of the Parish.

The estimates of the numbers living at the various ages mentioned in Table 1 have been obtained by use

of the proportions recorded at the census of 1891. Unsatisfactory as the data on which these figures are based have become, it is desirable to make use of them, as the rates calculated thereon constitute the only satisfactory basis of comparison between succeeding years and different districts.

TABLE 1.  
Sex-Age-Constitution of Populations estimated to  
middle of 1898.

|          | Age Groups. | Paddington. | St. Mary. | St. John. | London.   |
|----------|-------------|-------------|-----------|-----------|-----------|
| PERSONS. | All ages    | 127,678     | 94,248    | 33,430    | 4,504,766 |
|          | 0-1         | 2,695       | 2,304     | 391       | 116,378   |
|          | 1-5         | 9,441       | 7,860     | 1,581     | 420,490   |
|          | 5-15        | 21,213      | 17,195    | 4,018     | 930,977   |
|          | 15-25       | 27,292      | 19,011    | 8,281     | 904,141   |
|          | 25-65       | 61,036      | 43,523    | 17,513    | 1,954,218 |
|          | 65 and over | 6,001       | 4,355     | 1,646     | 178,562   |
|          | 0-5         | 12,136      | 10,164    | 1,972     | 536,868   |
|          | 5 and over  | 115,542     | 84,084    | 31,458    | 3,967,898 |
|          |             |             |           |           |           |
| MALES.   | All ages    | 52,836      | 40,927    | 11,909    | 2,129,403 |
|          | 0-1         | 1,321       | 1,131     | 190       | 57,707    |
|          | 1-5         | 4,660       | 3,887     | 773       | 209,320   |
|          | 5-15        | 10,235      | 8,370     | 1,865     | 462,080   |
|          | 15-25       | 10,497      | 7,826     | 2,671     | 418,854   |
|          | 25-65       | 24,079      | 18,255    | 5,824     | 910,959   |
|          | 65 and over | 2,044       | 1,458     | 586       | 70,483    |
|          | 0-5         | 5,981       | 5,018     | 963       | 267,027   |
|          | 5 and over  | 46,855      | 35,909    | 10,946    | 1,862,376 |
|          |             |             |           |           |           |
| FEMALES. | All ages    | 74,842      | 53,321    | 21,521    | 2,375,363 |
|          | 0-1         | 1,374       | 1,173     | 201       | 58,671    |
|          | 1-5         | 4,781       | 3,973     | 808       | 211,170   |
|          | 5-15        | 10,978      | 8,825     | 2,153     | 468,897   |
|          | 15-25       | 16,795      | 11,185    | 5,610     | 485,287   |
|          | 25-65       | 36,957      | 25,268    | 11,689    | 1,043,259 |
|          | 65 and over | 3,957       | 2,897     | 1,060     | 108,079   |
|          | 0-5         | 6,155       | 5,146     | 1,009     | 269,841   |
|          | 5 and over  | 68,687      | 48,175    | 20,512    | 2,105,522 |
|          |             |             |           |           |           |



## BIRTHS.

During the year (fifty-two weeks) 2,965 births were registered in the Parish, viz., 1,513 of boys and 1,452 of girls, equivalent to a rate of 23·22 per 1,000 inhabitants. That rate was 0·98 below the mean rate of the preceding six years (24·20), and 1·18 below the decennial mean rate (24·40). (See Tables 2 and 3). Last year's rate was the lowest recorded in

TABLE 2.  
Births registered and Birth-Rates.

| Births registered<br>1898.       | Paddington. |          |                | St. Mary. |          |                | St. John. |          |                |
|----------------------------------|-------------|----------|----------------|-----------|----------|----------------|-----------|----------|----------------|
|                                  | Males.      | Females. | Both<br>Sexes. | Males.    | Females. | Both<br>Sexes. | Males.    | Females. | Both<br>Sexes. |
| 1st Quarter .. ..                | 415         | 371      | 786            | 345       | 330      | 675            | 70        | 41       | 111            |
| 2nd    "    .. ..                | 349         | 348      | 697            | 305       | 305      | 610            | 44        | 43       | 87             |
| 3rd    "    .. ..                | 360         | 367      | 727            | 308       | 317      | 625            | 52        | 50       | 102            |
| 4th    "    .. ..                | 389         | 366      | 755            | 336       | 312      | 648            | 53        | 54       | 107            |
| Year .. ..                       | 1,513       | 1,452    | 2,965          | 1,294     | 1,264    | 2,558          | 219       | 188      | 407            |
| Birth Rates* 1898                | 11·85       | 11·37    | 23·22          | 13·72     | 13·41    | 27·14          | 6·55      | 5·62     | 12·17          |
| Mean Rate, 1892-7.<br>6 years. } | 12·38       | 11·80    | 24·20          | 14·29     | 13·86    | 28·16          | 7·22      | 6·20     | 13·43          |
| Rates 1897 ..                    | 11·97       | 11·86    | 23·84          | 13·96     | 13·90    | 27·86          | 6·45      | 6·21     | 12·66          |
| 1896 ..                          | 13·12       | 11·11    | 24·24          | 15·01     | 13·20    | 28·21          | 7·98      | 5·41     | 13·39          |
| 1895 ..                          | 12·34       | 11·92    | 24·26          | 14·01     | 13·87    | 27·88          | 7·64      | 6·43     | 14·07          |
| 1894 ..                          | 11·95       | 11·36    | 23·32          | 13·94     | 13·29    | 27·23          | 6·54      | 6·08     | 12·62          |
| 1893 ..                          | 12·47       | 12·49    | 24·96          | 14·41     | 14·85    | 29·26          | 7·29      | 6·16     | 13·45          |
| 1892 ..                          | 12·48       | 12·11    | 24·60          | 14·42     | 14·09    | 28·52          | 7·45      | 6·96     | 14·41          |

\* All rates are calculated per 1,000 persons in each District.

the eleven years, 1888-98. Rates below 24·0 per 1,000 have been recorded three times during that period, viz., in 1894 (23·32), 1897 (23·84), and 1898

(23·22). Last year the proportion of the births of girls to those of boys was as 96 to 100, as compared with 99 to 100 in 1897.

TABLE 3.  
Births and Birth-rates, 1888-98.

| Year.                              | Paddington. |        | St. Mary. |        | St. John. |        | Birth-rates.       |         |
|------------------------------------|-------------|--------|-----------|--------|-----------|--------|--------------------|---------|
|                                    | Regd.       | Rates. | Regd.     | Rates. | Regd.     | Rates. | England and Wales. | London. |
| 1888 .. ..                         | 2,843       | 24·6   | 2,331     | 29·5   | 512       | 13·9   | 31·2               | 32·1    |
| 1889 .. ..                         | 2,863       | 24·5   | 2,346     | 29·2   | 517       | 14·1   | 31·1               | 31·9    |
| 1890 .. ..                         | 2,901       | 24·4   | 2,389     | 29·1   | 512       | 14·0   | 30·2               | 30·7    |
| 1891 .. ..                         | 2,952       | 25·1   | 2,420     | 28·8   | 532       | 15·8   | 31·4               | 31·9    |
| 1892 .. ..                         | 2,934       | 24·6   | 2,456     | 28·5   | 478       | 14·4   | 30·5               | 31·0    |
| 1893 .. ..                         | 3,011       | 25·2   | 2,567     | 29·8   | 444       | 13·4   | 30·8               | 30·9    |
| 1894 .. ..                         | 2,834       | 23·3   | 2,423     | 27·2   | 411       | 12·6   | 29·6               | 30·3    |
| 1895 .. ..                         | 2,979       | 24·3   | 2,526     | 27·9   | 453       | 14·0   | 30·4               | 30·6    |
| 1896 .. ..                         | 3,068       | 24·2   | 2,613     | 28·2   | 455       | 13·4   | 29·7               | 30·2    |
| 1897 .. ..                         | 3,010       | 23·8   | 2,586     | 27·8   | 424       | 12·7   | 29·7               | 30·1    |
| Averages }<br>10 years<br>1888-97. | 2,940       | 24·40  | 2,466     | 28·60  | 474       | 13·83  | 30·46              | 30·97   |
| 1898 .. ..                         | 2,965       | 23·22  | 2,558     | 27·14  | 407       | 12·17  | 29·4               | 29·5    |

In North Paddington 2,558 births were registered (1,294 of boys and 1,264 of girls) equivalent to a rate of 27·14 per 1,000 inhabitants of the district, 1·02 below the rate for the preceding six years (28·16), and 1·46 below the decennial mean (28·60). In South Paddington there were 407 births (219 of boys and 188 of girls), the rate being 12·17, as compared with a mean rate of 13·43 (a decrease of 1·26) for the preceding six years and a decennial mean of 13·83 (a decrease of 1·66).

In the Metropolis 132,432 births were registered, giving a rate of 29·5 (the lowest on record), as compared with a decennial mean rate of 30·97. In England and Wales the births numbered 922,873, and the rate was 29·4, as compared with a decennial mean of 30·46.

The birth rate for the Parish (23·2) was 6·7 below that for the Metropolis, (29·5), and 6·2 below that for England and Wales (29·4).

Of the 2,965 births registered in the Parish, 121 were illegitimate. The legitimate birth-rate was 22·27, or 1·02 below the decennial mean (legitimate) rate, and the illegitimate 0·95, 0·17 below the decennial mean. (See Table 4.) For every 100 legitimate births there were 4·25 illegitimate, the decennial average being 3·68. With the exception of 1894, when the proportion was 5·22, this is the highest ratio since 1892.

### VACCINATION.

The figures given in Table 5 indicate an increasing neglect of this most valuable precaution, the percentage remaining unaccounted-for rising from 9·0 per cent. in 1896 to 10·0 in 1897. In the latter year the "unaccounted for" included six certificates of "conscientious objection." In the first half of 1898, the latest period for which returns have been made up, the percentage of unaccounted-for children

TABLE 4.  
Illegitimate Births and Birth-rates.

| Year.                            | Births Registered. |               |        | Birth-rates per 1,000 of Population. |               |        | Illegitimate Births per 100 Legitimate. |
|----------------------------------|--------------------|---------------|--------|--------------------------------------|---------------|--------|-----------------------------------------|
|                                  | Legitimate.        | Illegitimate. | Total. | Legitimate.                          | Illegitimate. | Total. |                                         |
| 1888 ...                         | 2,694              | 149           | 2,843  | 23·3                                 | 1·28          | 24·6   | 5·24                                    |
| 1889 ...                         | 2,729              | 134           | 2,863  | 23·4                                 | 1·14          | 24·5   | 4·68                                    |
| 1890 ...                         | 2,741              | 160           | 2,901  | 23·1                                 | 1·34          | 24·4   | 5·51                                    |
| 1891 ...                         | 2,807              | 145           | 2,952  | 23·9                                 | 1·23          | 25·1   | 4·91                                    |
| 1892 ...                         | 2,792              | 142           | 2,934  | 23·4                                 | 1·18          | 24·6   | 4·77                                    |
| 1893 ...                         | 2,885              | 126           | 3,011  | 24·1                                 | 1·04          | 25·2   | 4·18                                    |
| 1894 ...                         | 2,686              | 148           | 2,834  | 22·1                                 | 1·21          | 23·3   | 5·22                                    |
| 1895 ...                         | 2,854              | 125           | 2,979  | 23·3                                 | 1·01          | 24·3   | 4·19                                    |
| 1896 ...                         | 2,949              | 119           | 3,068  | 23·3                                 | 0·94          | 24·2   | 4·03                                    |
| 1897 ...                         | 2,903              | 107           | 3,010  | 23·0                                 | 0·84          | 23·8   | 3·68                                    |
| Averages<br>10 years<br>1888-97. | 2,804              | 136           | 2,940  | 23·29                                | 1·12          | 24·4   | 3·68                                    |
| 1898 ...                         | 2,844              | 121           | 2,965  | 22·27                                | 0·95          | 23·22  | 4·25                                    |

increased to 15·3. There is always an increase in this figure in the first return for each year, and doubtless when the complete returns for 1898 are available, the percentage will be nearer 10. Having regard to the almost universal neglect of vaccination in this country, these figures cannot be considered unsatisfactory.

It is interesting to note how the rise and fall in the percentage of unaccounted-for infants follow the variations in the prevalence of smallpox. Thus in

TABLE 5.

## Vaccination Returns 1881-1897.

| Year.                        | Births. | Successfully vaccinated. | Insusceptible of vaccination. | Had Small-pox. | Died unvaccinated. | Vaccination postponed. | Remaining (not traced, &c., &c.)* | Children not accounted for (including postponed cases) % of births. |
|------------------------------|---------|--------------------------|-------------------------------|----------------|--------------------|------------------------|-----------------------------------|---------------------------------------------------------------------|
| 1881 .. ..                   | 2,845   | 2,415                    | 8                             | ...            | 203                | 7                      | 212                               | 7·7                                                                 |
| 1882 .. ..                   | 2,897   | 2,411                    | 8                             | ...            | 212                | 17                     | 249                               | 9·2                                                                 |
| 1883 .. ..                   | 2,873   | 2,381                    | 7                             | ...            | 231                | 16                     | 238                               | 8·8                                                                 |
| 1884 .. ..                   | 2,955   | 2,460                    | 13                            | ...            | 239                | 43                     | 200                               | 8·2                                                                 |
| 1885 .. ..                   | 3,019   | 2,489                    | 12                            | ...            | 252                | 38                     | 228                               | 8·8                                                                 |
| 1886 .. ..                   | 2,923   | 2,409                    | 7                             | ...            | 213                | 26                     | 268                               | 10·1                                                                |
| 1887 .. ..                   | 2,915   | 2,440                    | 11                            | ...            | 220                | 40                     | 204                               | 8·4                                                                 |
| 1888 .. ..                   | 2,855   | 2,293                    | 22                            | ...            | 216                | 38                     | 286                               | 11·3                                                                |
| 1889 .. ..                   | 2,870   | 2,275                    | 7                             | ...            | 223                | 68                     | 297                               | 12·7                                                                |
| 1890 .. ..                   | 2,845   | 2,255                    | 7                             | ...            | 254                | 29                     | 300                               | 11·6                                                                |
| 1891 .. ..                   | 2,968   | 2,172                    | 16                            | ...            | 254                | 32                     | 494                               | 17·7                                                                |
| 1892 .. ..                   | 2,957   | 2,374                    | 7                             | ...            | 202                | 16                     | 358                               | 12·6                                                                |
| 1893 .. ..                   | 3,015   | 2,421                    | 27                            | ...            | 265                | 10                     | 292                               | 10·0                                                                |
| 1894 .. ..                   | 2,853   | 2,369                    | 24                            | ...            | 203                | 21                     | 236                               | 8·2                                                                 |
| 1895 .. ..                   | 2,986   | 2,378                    | 24                            | ...            | 302                | 21                     | 261                               | 8·8                                                                 |
| 1896 .. ..                   | 3,042   | 2,443                    | 28                            | ...            | 286                | 11                     | 274                               | 9·0                                                                 |
| 1897 .. ..                   | 3,039   | 2,461                    | 10                            | ...            | 262                | 31                     | 275                               | 10·0                                                                |
| January to }<br>June, 1898 } | 1,463   | 1,085                    | 4                             | ...            | 120                | 71                     | 183                               | 15·3                                                                |

\* Gone away, false addresses, "unaccounted for."

1889, when no deaths from this disease were recorded in the whole Metropolis, the percentage was 12·7, falling to 11·6 in 1890 (four deaths in the Metropolis), rising to a maximum (since 1881) of 17·7 in 1891 (eight deaths), falling to 12·6 in 1892 (41 deaths), to 10·0 in 1893 (206 deaths), and 8·2 in 1894 (88 deaths in the Metropolis, and an outbreak in Lisson Grove District, Marylebone), after which date it rose to 8·8 in 1895 (55 deaths), 9·0 in 1896 (nine deaths), and 10 in 1897 (16 deaths). Deaths from smallpox were recorded in Paddington in 1881 (seven deaths),

1885 (11 deaths), 1888 (one death), 1893 (four deaths), 1894 (three deaths), and 1896 (one death), and none in the intermediate years, or subsequent to 1896.

Last year a new Vaccination Act came into operation, of which the most important provisions are :— (1), the raising of the age limit for vaccination to six months ; (2), the substitution of calf for humanised lymph in official vaccination ; and (3), the relief given to conscientious objectors. Vaccination cannot now be regarded as compulsory. The efforts of the official machinery, under the Vaccination Acts, are confined to looking up the unvaccinated, offering vaccination, and prosecuting those too lazy or indifferent to appear before a Bench of Magistrates and obtain a certificate of exemption. There is no definition of a “conscientious objection,” and it is difficult to understand what that term implies. Happily, by the end of 1898 only 25 such certificates had been granted to local applicants. It is to be hoped that the persuasive efforts of the Vaccination Officer and Public Vaccinator, added to the intelligence of the inhabitants, will suffice to maintain a high standard of (vaccination) protection in the parish—otherwise the ultimate issue is beyond the region of doubt.

## NOTIFICATION OF INFECTIOUS DISEASES.

The reported cases of infectious disease numbered 772, 231 fewer than in 1897 (1,003), and 454 fewer than in 1896 (1,226). Last year's total was 228 below the average annual number for the eight years, 1890-97, after correction for the changes in the population. The sickness-rate, based on the notifications, was 6·04 per 1,000 persons of all ages, as compared with a mean annual rate of 7·75 for the preceding eight years. The rate for 1897 was 7·94, and that for 1896, 9·68. (See Table 6.)

In the Metropolis 37,382 cases were reported, 7,834 less than the annual average, 8,083 less than the total for 1897, and 12,384 less than that for 1896. Last year's sickness-rate was 8·29, as compared with a mean annual rate of 9·93 for 1890-97, and rates of 10·18 and 11·10 in 1897 and 1896 respectively. The reductions in last year's totals were equivalent to 23·1 and 17·8 per cent. of the figures for 1897 for the Parish and the Metropolis respectively, and to 37·1 and 24·9 per cent. of the figures for 1896.

|                            |     | Totals for 1896. | Totals for 1897. |
|----------------------------|-----|------------------|------------------|
|                            |     | 100.             | 100.             |
| Paddington total, 1898 ... | ... | 62·9             | 76·9             |
| London do. ...             | ... | 75·1             | 82·2             |

In the Parish all the notifiable diseases, with the exception of enteric fever, were under the respective averages, while in the Metropolis diphtheria alone was in excess of the average. (See Table 6). There was a very large reduction in the number of cases of

TABLE 6.  
NOTIFICATIONS.

Comparison of Returns for Paddington and London,  
with the respective averages for 1890-97.  
(Corrected for duplicates.)

|           |                | Notifications. |                                 |         |                                 | Sickness Rates. |       |       |         |       |       |
|-----------|----------------|----------------|---------------------------------|---------|---------------------------------|-----------------|-------|-------|---------|-------|-------|
|           |                | Paddington.    |                                 | London. |                                 | Paddington.     |       |       | London. |       |       |
|           |                | 1898.          | Difference<br>from<br>Average.* | 1898.   | Difference<br>from<br>Average.* | 1898.           | 1897. | 1896. | 1898.   | 1897. | 1896. |
| Fevers.   | Smallpox ...   | ...            | -16                             | 35      | -736                            | ...             | 0.00  | 0.03  | 0.00    | 0.02  | 0.05  |
|           | Cholera ...    | ...            | 0†                              | 23      | -14                             | ...             | 0.00  | ...   | 0.00    | 0.00  | 0.00  |
|           | Diphtheria ... | 254            | -11                             | 11,561  | +1,112                          | 1.98            | 2.47  | 1.84  | 2.56    | 2.87  | 2.98  |
|           | Membr. Croup   | 4              | -3                              | 310     | -225                            | 0.03            | 0.07  | 0.06  | 0.06    | 0.08  | 0.09  |
|           | Erysipelas ... | 130            | -10                             | 5,180   | -1,330                          | 1.01            | 1.07  | 0.92  | 1.12    | 1.29  | 1.43  |
|           | Scarlet ...    | 303            | -195                            | 16,917  | -6,200                          | 2.37            | 3.88  | 6.24  | 3.75    | 5.12  | 5.72  |
|           | Typhus ...     | ...            | 0‡                              | 18      | -1                              | ...             | ...   | ...   | 0.00    | 0.00  | 0.00  |
|           | Enteric ...    | 74             | +11                             | 3,032   | -298                            | 0.57            | 0.35  | 0.48  | 0.67    | 0.69  | 0.71  |
|           | Relapsing      | ...            | 0‡                              | 1       | -8                              | ...             | ...   | ...   | 0.00    | 0.00  | 0.00  |
|           | Continued      | 2              | 0                               | 55      | -98                             | 0.01            | ...   | 0.00  | 0.01    | 0.01  | 0.02  |
|           | Puerperal      | 5              | 4                               | 250     | -36                             | 0.03            | 0.05  | 0.08  | 0.05    | 0.05  | 0.06  |
| Totals... |                | 772            | -228                            | 37,382  | -7,834                          | 6.04            | 7.94  | 9.68  | 8.29    | 10.18 | 11.10 |

\* Averages corrected for changes in population, and adjusted to nearest whole numbers.

† Two cases of Cholera reported during the eight years.

‡ One case of each disease reported during the eight years.

membranous croup reported in the Metropolis, which, taken in conjunction with the increase in the cases of diphtheria reported, indicates a change in practice of using the former term. Membranous croup is generally held as synonymous with diphtheria, and the Asylums Board will not admit cases of "membranous croup" unless the certificate bears the additional qualification "of diphtheric origin" or "nature." There has been a steady increase in the proportion of cases of diphtheria admitted to the Board's hospitals, and it does not appear improbable that a wish to secure admission to these hospitals has affected the practice of naming the disease.

Having regard to the intimate relations between this and the adjoining districts, it will be useful to consider what amount of infectious disease prevailed in the latter during the year. For this purpose Table 7 has been got out, the figures being taken from the returns of the Local Government and the Metropolitan Asylums Boards, and the rates for Paddington specially re-calculated for this table, on the population as estimated by the Registrar-General, to secure uniformity of rates.

If the districts be arranged in order of rates, beginning with the highest (and worst) rate in each case, Paddington will come third on the list in respect of diphtheria and membranous croup, Willesden being

**TABLE 7.**  
Notification of Infectious Diseases in Districts co-terminous with Paddington.

| District                       | Pop., 1898. | Fever.       |      |           |         |             |               |             |          |        |          |            |            | All Diseases. |            |
|--------------------------------|-------------|--------------|------|-----------|---------|-------------|---------------|-------------|----------|--------|----------|------------|------------|---------------|------------|
|                                |             | 1898.        |      | Smallpox. | Cholera | Diphtheria. | Membr. Croup. | Erysipelas. | Scarlet. | Typhus | Enteric. | Relapsing. | Continued. |               | Puerperal. |
| PADDINGTON.                    | 127,480     | 1st Qr.      | ...  | ...       | ...     | 45          | 1             | 40          | 74       | ...    | 16       | ...        | ...        | ...           | 176        |
|                                |             | 2nd "        | ...  | ...       | ...     | 56          | ...           | 35          | 88       | ...    | 5        | ...        | ...        | 2             | 186        |
|                                |             | 3rd "        | ...  | ...       | ...     | 57          | 2             | 25          | 71       | ...    | 16       | ...        | 1          | 2             | 174        |
|                                |             | 4th "        | ...  | ...       | ...     | 96          | 1             | 30          | 70       | ...    | 37       | ...        | 1          | 1             | 236        |
|                                |             | Year         | ...  | ...       | ...     | 254         | 4             | 130         | 303      | ...    | 74       | ...        | 2          | 5             | 772        |
|                                |             | Rates † 1898 | ...  | ...       | ...     | 2.00        | 0.03          | 1.02        | 2.38     | ...    | 0.58     | ...        | 0.01       | 0.04          | 6.05       |
|                                | 1897        | 0.00         | 0.00 | 0.00      | 2.47    | 0.07        | 1.07          | 3.89        | ...      | 0.35   | ...      | ...        | 0.05       | 7.95          |            |
| ST. MARYLE-<br>BONE.           | 140,483     | 1st Qr.      | ...  | ...       | ...     | 55          | ...           | 34          | 65       | ...    | 14       | ...        | ...        | 2             | 170        |
|                                |             | 2nd "        | ...  | 1         | ...     | 59          | 1             | 44          | 80       | ...    | 12       | ...        | ...        | 3             | 200        |
|                                |             | 3rd "        | ...  | ...       | ...     | 64          | ...           | 47          | 88       | ...    | 20       | ...        | 2          | 2             | 223        |
|                                |             | 4th "        | ...  | ...       | ...     | 56          | ...           | 57          | 79       | ...    | 55       | ...        | ...        | 2             | 249        |
|                                |             | Year         | ...  | 1         | ...     | 234         | 1             | 182         | 312      | ...    | 101      | ...        | 2          | 9             | 842        |
|                                |             | Rates † 1898 | 0.00 | ...       | ...     | 1.67        | 0.00          | 1.29        | 2.22     | ...    | 0.72     | ...        | 0.01       | 0.06          | 6.98       |
|                                | 1897        | 0.02         | 0.01 | 1.54      | 0.02    | 1.80        | 2.81          | ...         | 0.62     | ...    | 0.00     | 0.03       | 6.90       |               |            |
| ST. GEORGE,<br>Hanover Square. | 80,608      | 1st Qr.      | ...  | ...       | ...     | 16          | ...           | 9           | 44       | ...    | 6        | ...        | ...        | ...           | 76         |
|                                |             | 2nd "        | ...  | 1         | ...     | 33          | ...           | 14          | 65       | ...    | 7        | ...        | ...        | 1             | 121        |
|                                |             | 3rd "        | ...  | ...       | ...     | 29          | ...           | 8           | 74       | ...    | 5        | ...        | 1          | 1             | 118        |
|                                |             | 4th "        | ...  | ...       | ...     | 32          | 1             | 12          | 38       | ...    | 21       | ...        | ...        | ...           | 104        |
|                                |             | Year         | ...  | 1         | ...     | 110         | 1             | 43          | 221      | ...    | 39       | ...        | 1          | 2             | 418        |
|                                |             | Rates † 1898 | 0.01 | ...       | ...     | 1.37        | 0.01          | 0.53        | 2.74     | ...    | 0.48     | ...        | 0.01       | 0.03          | 5.18       |
|                                | 1897        | 0.01         | ...  | 1.49      | ...     | 0.63        | 2.20          | ...         | 0.49     | ...    | 0.02     | 0.01       | 4.87       |               |            |
| KENSINGTON.                    | 172,174     | 1st Qr.      | ...  | ...       | ...     | 58          | 2             | 45          | 120      | 5      | 13       | ...        | ...        | 4             | 217        |
|                                |             | 2nd "        | ...  | ...       | ...     | 70          | 3             | 43          | 106      | 2      | 21       | ...        | 1          | 1             | 250        |
|                                |             | 3rd "        | ...  | ...       | 1       | 42          | 1             | 35          | 142      | ...    | 22       | ...        | ...        | 1             | 244        |
|                                |             | 4th "        | ...  | ...       | ...     | 45          | 1             | 54          | 106      | 2      | 48       | ...        | 3          | 5             | 264        |
|                                |             | Year         | ...  | ...       | 1       | 215         | 7             | 180         | 474      | 9      | 104      | ...        | 4          | 11            | 1005       |
|                                |             | Rates † 1898 | ...  | 0.00      | ...     | 1.25        | 0.04          | 1.05        | 2.75     | 0.05   | 0.60     | ...        | 0.02       | 0.06          | 5.83       |
|                                | 1897        | 0.00         | ...  | 1.87      | 0.05    | 1.38        | 4.36          | ...         | 0.68     | ...    | 0.02     | 0.09       | 8.49       |               |            |
| WILLESDEN.                     | 99,180      | 1st Qr.      | ...  | ...       | ...     | 83          | 1             | 15          | 92       | ...    | 3        | ...        | ...        | ...           | 194        |
|                                |             | 2nd "        | ...  | 1         | ...     | 81          | ...           | 19          | 97       | ...    | 12       | ...        | ...        | 1             | 211        |
|                                |             | 3rd "        | ...  | ...       | ...     | 99          | ...           | 15          | 78       | ...    | 7        | ...        | ...        | 1             | 200        |
|                                |             | 4th "        | ...  | ...       | ...     | 69          | 1             | 23          | 94       | ...    | 45       | ...        | ...        | ...           | 232        |
|                                |             | Year         | ...  | 1         | ...     | 332         | 2             | 72          | 361      | ...    | 67       | ...        | ...        | 2             | 837        |
|                                |             | Rates † 1898 | 0.01 | ...       | ...     | 3.34        | 0.02          | 0.74        | 3.63     | ...    | 0.67     | ...        | ...        | 0.02          | 8.43       |
|                                | 1897        | 0.01         | 0.02 | 3.01      | 0.05    | 1.14        | 5.44          | ...         | 0.57     | ...    | 0.01     | 0.09       | 10.36      |               |            |
| CHELSEA.*                      | 96,713      | 1st Qr.      | ...  | ...       | ...     | 60          | 2             | 27          | 87       | ...    | 11       | ...        | ...        | 1             | 188        |
|                                |             | 2nd "        | ...  | ...       | ...     | 91          | 1             | 21          | 80       | ...    | 4        | ...        | 1          | ...           | 198        |
|                                |             | 3rd "        | ...  | ...       | ...     | 69          | ...           | 22          | 83       | ...    | 10       | ...        | ...        | 2             | 186        |
|                                |             | 4th "        | ...  | ...       | ...     | 48          | 2             | 24          | 86       | ...    | 30       | ...        | ...        | 2             | 192        |
|                                |             | Year         | ...  | ...       | ...     | 268         | 5             | 94          | 336      | ...    | 55       | ...        | 1          | 5             | 764        |
|                                |             | Rates † 1898 | ...  | ...       | ...     | 2.77        | 0.05          | 0.97        | 3.47     | ...    | 0.57     | ...        | 0.01       | 0.05          | 7.89       |
|                                | 1897        | ...          | ...  | 3.17      | 0.06    | 1.01        | 5.05          | ...         | 0.53     | ...    | ...      | 0.05       | 9.89       |               |            |

\* Only the "Kensal Town" part of Chelsea touches Paddington, but the figures for that area are not available.

† Rates per 1,000 of the estimated population in each case.

first ; fifth as regards scarlet fever, Willesden being again first ; fourth as regards enteric and continued fevers, Marylebone first ; and fourth again as regards puerperal fever, Marylebone and Kensington being equal for first.

Closely connected with this part of the subject is the frequency of importation of infection, by which is to be understood the occurrence of illness in an individual within a given interval of time (being less than the proper incubation period) after his arrival in the Parish from other parts. In 66 instances, including secondary cases, the date of the first attack indicated that the infection had been derived from sources beyond the Parish, including diphtheria, 26, scarlet fever, 25, and enteric fever, 15. Moreover, many children residing in Paddington attend extra-parochial schools.

In Table 8 will be found the age-group rates for each sex, and for each division of, and the whole, Parish, calculated from the cases of disease reported, those for the past year being set in comparison with the rates for the years 1894-97. The rates for 1898 were, with one or two exceptions, below those for 1897, and were in many cases the lowest recorded in the five years. The increased amount of enteric fever recorded is the only unsatisfactory feature of the Table, but with the exception of St. Mary, males

TABLE 8.

0.0 Rates under 0.1 per thousand

"0—5," the rates for this disease, where increased, were not in excess of the maxima of previous years. There was a satisfactory reduction in the diphtheria rates generally.

### SMALLPOX.

|                                    |     |     | Paddington. | London. |
|------------------------------------|-----|-----|-------------|---------|
| Cases reported, 1898 ...           | ... | ... | —           | 35      |
| Average annual number, 1890-97 ... |     |     | 16          | 771     |
| Case-rate*, 1898 ...               | ... | ... | —           | 0·00†   |

The Parish has been free from this disease for over two years past. It is impossible to say how many of the 35 cases recorded in London were genuine smallpox, probably less than half. The Report of the Asylums Board shows that 83·3 per cent. of the cases sent to hospital in 1898 were erroneously diagnosed.

The continued exemption from smallpox taken in connection with the increased neglect of vaccination, cannot be used as an argument for the theory that sanitation without vaccination will successfully secure the community from this disease. That doctrine was taught and practised at Gloucester, with results disastrous alike to the City and its citizens. Unfortunately the discredit which fell on its exponents during

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\* All rates, except where otherwise stated, are calculated per 1,000 persons of all ages.

† 0·00 indicates a rate under 0·01.

the epidemic has proved to be only too transient, the lessons of experience, if bitter, being notoriously short-lived, until they have been driven home by frequent repetition.

### CHOLERA.

|                         |     |     | Paddington. | London. |
|-------------------------|-----|-----|-------------|---------|
| Cases reported in 1898  | ... | ... | —           | 23      |
| Annual average, 1890-97 | ... | ... | 0*          | 37      |
| Case-rate, 1898         | ... | ... | —           | 0.00    |

Only two cases of cholera have been reported in Paddington since the commencement of notification, both cases being of the English variety. In the Metropolis the 23 cases reported were 15 fewer than the total for 1897, the majority of cases being most probably English cholera.

### DIPHTHERIA.†

|                         |     |     | Paddington. | London. |
|-------------------------|-----|-----|-------------|---------|
| Cases reported in 1898  | ... | ... | 258         | 11,871  |
| Annual average, 1890-97 | ... | ... | 272         | 12,758  |
| Case-rate, 1898         | ... | ... | 2.01        | 2.62    |

The total of 258 cases was 64 below the total for 1897, and 124 below that for 1894, when the maximum of the nine years, 1890-98, was recorded. In North Paddington 228 cases were recorded, being 8 fewer than the corrected average, and in South

\* "0" indicates an average under 1 after correction and adjustment.

† Throughout this Report cases of Membranous Croup are classed under Diphtheria, unless otherwise stated.

Paddington, 30, 6 fewer than the average. The reduction in the Northern District was equal to 3·4 per cent. of the average, and that in the Southern, to 16·7 per cent. The actual figures for the nine years are given below :—

|                      | 1890. | 1891. | 1892. | 1893. | 1894. | 1895. | 1896. | 1897. | 1898. |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| North Paddington ... | 199   | 160   | 134   | 237   | 340   | 209   | 195   | 275   | 228   |
| South " ...          | 25    | 24    | 39    | 57    | 42    | 28    | 47    | 47    | 30    |
| Paddington ...       | 224   | 184   | 173   | 294   | 382   | 237   | 242   | 322   | 258   |

Of the 228 cases reported from North Paddington, in 8 instances the original diagnosis was found to be erroneous; 15 were due to imported infection; in 7, the attack of diphtheria followed the return home of patients from hospital, in 2 the disease was contracted in hospital, and in one the attack of diphtheria followed one of scarlet fever. In 9 instances the patient died on the day of notification, and in 8, previously to notification.

The disease was more prevalent along the northern boundary than in other parts of North Paddington, the following nine streets furnishing 92 cases, more than one-fourth of the number reported in the whole district :—

|                                    |   |    |   |                                       |   |    |   |
|------------------------------------|---|----|---|---------------------------------------|---|----|---|
| Ashmore Road 11 cases in 10 houses |   |    |   | Kilburn Pk. Rd. 16 cases in 14 houses |   |    |   |
| Bravington Rd. 22                  | " | 15 | " | Portnall Road 9                       | " | 9  | " |
| Chippenhams Road 6                 | " | 5  | " | Saltram Cres. 5                       | " | 4  | " |
| Fernhead Road 8                    | " | 5  | " | Shirland Road 11                      | " | 10 | " |
|                                    |   |    |   | Walterton Road 4                      | " | 3  |   |

Cases, 92. Houses attacked, 75.

These streets comprise 1,690 houses (approximately).

More than three cases were also reported from each of the following streets :—

|                 |                     |   |   |             |                     |   |   |
|-----------------|---------------------|---|---|-------------|---------------------|---|---|
| Adpar Street    | 4 cases in 4 houses |   |   | Harrow Road | 6 cases in 5 houses |   |   |
| Campbell Street | 5                   | " | 2 | "           | Ledbury Road        | 4 | " |
| Elgin Avenue    | 5                   | " | 5 | "           | Porteus Road        | 6 | " |
| Fermoy Road     | 4                   | " | 3 | "           | Woodchester St.     | 5 | " |
| Hall Place      | 4                   | " | 3 | "           |                     |   |   |

Cases, 43. Houses attacked, 31.

The streets comprise 1,090 houses (approximately.)

Had there been the same prevalence of disease in the second as in the former group, some 60 cases would have been recorded there in lieu of 43.

In compiling these lists, the occurrence of more than three cases in the year was the only factor considered. Allusion has already been made to the prevalence of diphtheria in Willesden, and it does not appear to be unreasonable to attribute some of the special incidence on the streets of the first list to infection acquired in or imported from that District.

The frequency of secondary cases is shown by the following statement :—

|     |        |     |   |       |         |
|-----|--------|-----|---|-------|---------|
| 167 | Houses | had | 1 | case  | each ;  |
| 21  | "      | "   | 2 | cases | " ;     |
| 2   | "      | "   | 3 | "     | " ;     |
| 2   | "      | "   | 4 | "     | " ; and |
| 1   | House  | "   | 5 | "     |         |

An analysis of the cases from houses having more than one case shows that the infection was spread by personal contact with the first, or preceding, patients. There is no evidence, as far as this disease

is concerned, of any break-down in the processes of disinfection during the year. The occurrence of "sore throats" of an indefinite character was noted in several cases, notably in the house from which five cases were reported. In 14 instances in all did these sore throats, most probably of a diphtheritic nature, precede attacks notified as diphtheria. The occurrence of diphtheria after measles has been recorded by more than one observer, and during the year 7 patients had an attack of that disease prior to succumbing to diphtheria.

The disease in South Paddington was not specially prevalent in any part. Of the 30 cases reported, 11 were due to imported infection, and one case was erroneously diagnosed.

|    |        |   |        |       |
|----|--------|---|--------|-------|
| 21 | Houses | 1 | case   | each; |
| 1  | House  | 2 | cases; |       |
| 1  | "      | 3 | "      | ; and |
| 1  | "      | 4 | "      |       |

In the two last groups the infection was imported.

Of the 258 cases reported, 166, or 64·3 per cent., were removed to hospital, as compared with 60·8 per cent. in 1897, 50·0 in 1896, 53·0 in 1895, and 56·2 in 1894. Of children under 5 years of age, 71·0 per cent. were admitted to hospital. Of the cases in North Paddington 65·3 per cent. were removed, and of those in South, 56·6.

## SCARLET FEVER.

|                                    | Paddington. | London. |
|------------------------------------|-------------|---------|
| Cases reported, 1898 ... ..        | 303         | 16,917  |
| Average annual number, 1890-97 ... | 498         | 23,117  |
| Case-rate, 1898... ..              | 2.37        | 3.75    |

The cases of this disease during the past year were 188 fewer than the total in 1897, and 487 fewer than 1896, the year of the maximum (790) since the commencement of notification. Fewer cases were reported in 1890 (215), 1891 (263), and 1894 (289), but in each of the other years the total was in excess of that for last year, which latter was 195 below the corrected annual average. In the Metropolis the 16,917 cases recorded last year were 6,200 below the corrected annual average for the eight preceding years, and the smallest total recorded since 1891, when 11,398 cases were reported. In 1890 15,330 cases were reported, 1,587 fewer than last year. In comparison both with the corrected annual averages and the totals for 1897, the reduction in the prevalence of this disease was equivalent to 38 per cent. in Paddington and 26 in London.

From North Paddington 253 cases were reported, 178 fewer than in 1897, and 166 fewer than the corrected annual average. Smaller totals were recorded in 1890 (183), 1891 (217), and 1894 (238). The maximum (664) since the introduction of notification was recorded in 1896. From South Paddington 50 cases were reported, 10 less than in

1897, and 29 less than the corrected annual average. In 1890 and 1891 fewer cases were recorded, viz., 32 and 46 respectively, all the remaining years having higher totals, the maximum having been in 1893 (148). The totals for last year were equivalent to a rate of 2·68 per 1,000 in North and one of 1·49 in South Paddington, whilst the reduction in the prevalence, compared with the annual averages for the eight years, 1890-97, were 39·7 and 36·7 respectively.

Of the cases from North Paddington, 18 were due to imported infection, 9 followed the home-coming of patients from hospital, 7 were erroneously diagnosed, and one was contracted in hospital. The following is a list of streets in which more than three cases were reported during the year :—

|                  |                     |                  |                     |
|------------------|---------------------|------------------|---------------------|
| Amberley Road    | 6 cases in 4 houses | Oakington Road   | 4 cases in 2 houses |
| Ashmore Road     | 6    "    4    "    | Portnall Road    | 10    "    10    "  |
| Barnsdale Road   | 5    "    5    "    | Portsdown Road   | 4    "    2    "    |
| Bravington Rd.   | 13    "    12    "  | Saltram Crescent | 7    "    6    "    |
| Carlton Terrace  | 4    "    2    "    | Shirland Road    | 10    "    7    "   |
| Chippenham Rd.   | 4    "    2    "    | Southam Street   | 6    "    5    "    |
| Goldney Road     | 5    "    4    "    | Westbourne       |                     |
| Lydford Road     | 4    "    3    "    | Grove Terrace    | 12    "    4    "   |
| Marlboro' Street | 6    "    1    "    | Woodchester St.  | 7    "    4    "    |

There was not the same indication of any special prevalence on the northern boundary as was observed in diphtheria. The cases in Westbourne Grove Terrace formed part of a series occurring in the estab-

lishment of a business firm. Setting aside those cases, the numbers reported from individual houses were as follows :—

|                               |    |   |         |   |         |
|-------------------------------|----|---|---------|---|---------|
| From 166 houses 1 case each ; |    |   |         |   |         |
| „                             | 20 | „ | 2 cases | „ | ;       |
| „                             | 7  | „ | 3       | „ | „ ;     |
| „                             | 1  | „ | 6       | „ | „ ; and |
| „                             | 1  | „ | 8       | „ | „       |

It may be remarked that in the case of the house whence 6 cases were reported, 4 were reported at the beginning of the year, and 2 at the end, these latter being, however, subsequently certified as erroneously diagnosed. The house reported as having 8 attacks was the Infirmary, where the series of cases commenced with the illness of a nurse engaged in a children's ward.

Of the cases reported from South Paddington, 7 were due to imported infection, 2 followed the home-coming of patients from hospital, and one was erroneously diagnosed. From four streets only were more than three cases reported, viz., Queen's Gardens (4), Queen's Road (4), and Star Street (5). The numbers reported from individual houses were as follow :—

|                              |   |   |         |   |       |
|------------------------------|---|---|---------|---|-------|
| From 12 houses 1 case each ; |   |   |         |   |       |
| „                            | 5 | „ | 2 cases | „ | ; and |
| „                            | 2 |   | 4       | „ | „     |

From an examination of the circumstances under which the secondary cases occurred last year, it would appear that in one instance only was there reason to suspect the subsequent cases to have been

due to failure of disinfection processes after the earlier. In 5 instances the illness of the first patient was not diagnosed until made plain by the occurrence of the subsequent cases.

Of the 303 cases, 243 were removed to hospital, equal to 76·8 per cent., as compared with 77·3 per cent. in 1897, 76·8 in 1896, 65·3 in 1895, and 82·3 in 1894. Of the patients under five years of age, 82·5 per cent. went to hospital, and of those over 5 years of age, 79·3. Of the cases in North Paddington 81·4 per cent. were removed, and of those in South, 74·0.

#### ENTERIC (TYPHOID) FEVER.\*

|                                   | Paddington. | London. |
|-----------------------------------|-------------|---------|
| Cases reported, 1898 ... ..       | 76          | 3,087   |
| Average annual number, 1890-97... | 65          | 3,483   |
| Case-rate, 1898 ... ..            | 0·58        | 0·68    |

As already mentioned, this was the only disease of which the cases notified were in excess of the corrected annual average. The total for the year, (76), was 31 in excess of that for 1897, and the highest recorded since the commencement of notification. As will be seen from Table 7, there was more enteric fever in all the districts mentioned than in 1897, and of the rates prevailing in those districts, that for Paddington was fourth in order of descending magnitude. In the Metropolis there were 3,087 cases recorded, being 396 less than the annual

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\* Throughout this Report, unless otherwise stated, cases reported as Continued Fever are included under this heading.

average, and with the exception of 1892, when 2,612 cases were recorded, the lowest of the nine years. In 1897 the local rate from this disease was 0·35 per 1,000, half of that for the Metropolis (0·70), whilst that for last year was 0·58, as compared with 0·68 for the Metropolis. Compared in each case with the corrected annual average, the totals represent an *increase* of 16·9 per cent. in Paddington, and a *decrease* of 11·4 in the Metropolis.

In North Paddington 63 cases were recorded, as compared with 34 in 1897, and a corrected annual average of 49. The maximum recorded previous to 1898 was 58 in 1893, and the minimum 32 in 1891. In South Paddington 13 cases were recorded, 2 more than in 1897, and 3 below the corrected annual average. The total for 1897 was the lowest on record for this district, the maximum being 23, recorded in 1890. The rate for last year was 0·66 per 1,000 in North and 0·38 in South Paddington.

Of the cases reported from North Paddington, 10 were due to imported infection, neglecting a considerable number of cases of patients who were in the daily habit of getting their food in other parts of London where their work lay, and 5 were subsequently certified to have been erroneously diagnosed. Of the cases from South Paddington, 5 were due to imported infection.

The disease did not manifest any special incidence on any part of the Parish, except perhaps the area between Harrow and North Wharf Roads. In South Paddington the cases occurred singly, *i.e.*, one per street and house, but in North more cases than one were reported from the following streets :—

|                 |                    |                 |                     |
|-----------------|--------------------|-----------------|---------------------|
| Cirencester St. | 2 cases in 1 house | Kilburn Pk. Rd. | 2 cases in 2 houses |
| Cuthbert Street | 5    "    1    "   | North Wharf Rd. | 6    "    5    "    |
| Dudley Street   | 3    "    1    "   | Portnall Road   | 8    "    6    "    |
| Edbrooke Road   | 2    "    2 houses | Shirland Road   | 2    "    2    "    |
| Fernhead Road   | 2    "    2    "   | Woodchester St. | 2    "    2    "    |
| Harrow Road     | 2    "    2    "   | Woodfield Place | 5    "    1 house   |

and the numbers reported from individual houses were as follow :—

|                |                   |
|----------------|-------------------|
| From 44 houses | 1 case each ;     |
| "    2    "    | 2 cases " ;       |
| "    2    "    | 3    "    " ;     |
| "    1    "    | 4    "    " ; and |
| "    1    "    | 5    "    "       |

The infection of enteric fever is usually held to be but rarely transferred from person to person, the more common mode of transference being deemed to be through food or water. Under the latter circumstances, the dates of attacks of successive cases in any household would be at such intervals as would indicate either that the source of infection was the same for all cases and operative at or about the same time, or that infection from the first case had been received at such intervals as would suffice for the passage of the *materies morbi* into the food or water. In certain of the groups, notably 2 and 6, (Table 9), neither of

TABLE 9.

Particulars of groups of cases of Enteric Fever.

| Group. | Patient's<br>Sex. Age.                                                             | Date of<br>Sick-<br>ening.                                                                                                                | Treated.                      | Date of<br>Removal to<br>Hospital. | Disinfect-<br>tion.           | Water<br>Co. | Notes.                                                                                                                                                                                                  |
|--------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------|-------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | <i>m.</i> 33<br><i>m.</i> 2                                                        | ? 7 iii.<br>9 iii.                                                                                                                        | Hospital<br>,,                | 15 iii.<br>18 iii.                 | 15 iii.<br>18 iii.            | G. J.        | Diagnosed first as Influenza: had diarrhoea, and used chamber utensil without precautions.                                                                                                              |
| 2      | <i>f.</i> 13<br><i>f.</i> 11<br><i>f.</i> 36*<br><i>m.</i> 36                      | 18 vi.<br>14 vii.<br>16 vii.<br>24 viii.                                                                                                  | ,,<br>,,<br>,,<br>,,          | 2 vii.<br>19 vii.<br>31 viii.      | 2 vii.<br>19 vii.<br>31 viii. | W. M.        | First patient in habit of using W.C. as place for study: disease not recognised for upwards of three weeks and no precautions taken: washing done by *.                                                 |
| 3      | <i>f.</i> 15<br><i>m.</i> 11<br><i>m.</i> 3                                        | 28 viii.<br>14 xi.<br>14 xi.                                                                                                              | ,,<br>,,<br>,,                | 7 ix.<br>16 xi.                    | 8 ix.<br>21 xi.               | W. M.        | Family A } Apparently inde-<br>Family B } pendent source of<br>Family A } infection for 2nd<br>and 3rd case.                                                                                            |
| 4      | <i>m.</i> 12<br><i>f.</i> 34                                                       | ? viii.<br>11 x.                                                                                                                          | Home<br>,,                    | —<br>—                             | —<br>9 xi.                    | W. M.        | First patient's case not notified until after recovery: had been bathing in Serpentine: 2nd patient mother of 1st.                                                                                      |
| 5      | <i>m.</i> 11<br><i>m.</i> 9<br><i>f.</i> 30                                        | 25 x.<br>23 xi.<br>24 xi.                                                                                                                 | Hospital<br>,,<br>,,          | 3 xii.                             | 3 xii.                        | W. M.        | Family moved in from Hampstead in Sept.: not been well since: no diagnosis of first case, and no precautions.                                                                                           |
| 6      | <i>m.</i> 15<br><i>f.</i> 3<br><i>f.</i> 43<br><br><i>f.</i> 14<br><br><i>m.</i> 1 | 21 x.<br>23 xi.<br>8 xii.<br><br>9 xii.<br><br>Notified as ill with enteric fever, but died of tubercular meningitis: error of diagnosis. | Hospital<br>,,<br>,,<br><br>} | 4 xi.<br>14 xii.                   | 4 xi.<br>15 xii.              | G. J.        | Works out and feeds anywhere. This child ill but case not diagnosed until after cases 3 and 4 when Widal's test was used: no precautions.<br>{ Came to nurse mother and sister: failed within few days. |

these conditions appear to have been fulfilled. With the exception of group 3, the details set out under "Notes" in that Table make it clear why there were successions of cases in the households enumerated, the chief factor being apparently direct transference from patient to patient through neglect of all precautions.

After eliminating the cases due to imported infection, those erroneously diagnosed, and all secondary cases, there remain 33 cases in North and 7 cases in South Paddington, the origins of which were not traced. These have been examined in various ways, chiefly as regards water and milk supplies, and condition of drainage, &c. The results as regards water supply show that the Grand Junction Company supplied 10 of the houses in North and 7 in South Paddington, and the West Middlesex 23 in the North, and none in the South, but no conclusion can be drawn from these figures, as nothing is known as to the numbers of services belonging to the respective companies in each area. The milk supply was too varied to account for any of the cases. The results of the examination of the drains, &c., made after notification of the cases are, however, more instructive, and will be found summarised in Table 10. Briefly the outcome of the tabulation is to show that of the 33 cases in North Paddington, 5 were reported from houses found to be in "very good" condition, 3 from houses in "good," 15 from houses in "bad," and 10 from houses

TABLE 10.  
Results of Examination of Drains, etc., after Enteric Fever.

| Reference No. | DRAIN.  |               |             |              | W.C.'s.         | SOIL PIPE.       | WASTE PIPES. |          | WATER SERVICE. CISTERNS. |           |            | TESTS.       |         |      | Class. |      |    |
|---------------|---------|---------------|-------------|--------------|-----------------|------------------|--------------|----------|--------------------------|-----------|------------|--------------|---------|------|--------|------|----|
|               | Joints. | Soil.         | Trap.       | Ventilation. |                 | Position.        | Cut off.     | Traps.   | Supply                   | Position. | Condition. | Drain. W. S. | S.P. S. |      |        |      |    |
| NORTH.        | 1       | u. j.         | m. d.       | nil.         | S.R.W.P.        | L.H. : P.C.      | inside       | yes      | B.                       | si.       | bad        | clean        | +       | —    | —      | V.B. |    |
|               | 2       | N. D.         | 1897        | nil.         |                 |                  |              |          |                          |           |            |              |         |      |        | V.G. |    |
|               | 3       | ?             | ?           | nil.         | nil.            | L.H.             | none         | no       | B.                       | si.       | bad        | ?            | —       | L.   | —      | V.B. |    |
|               | 4       | u. j.         | w.          | nil.         | R.W.P.          | L.H.             | none         | no       | —                        | se.       | good       | clean        |         |      |        | V.B. |    |
|               | 5       | u. j.         | w.          | nil.         | none            | L.H.             | none         | yes      | G.                       | o.m.      | good       | —            | +       | —    | —      | V.B. |    |
|               | 6       | Q. P.         | exc. R.     | W. P.        | to S. P.        |                  |              |          |                          |           |            |              |         |      |        |      | G. |
|               | 7       | u. j.         | m. d.       | nil.         | S.R.W.P.        | L.H. : P.C.      | outside      | 1 con'd. | B.                       | si.       | bad        | dirty        | +       | n.   | n.     | V.B. |    |
|               | 8       | u. j.         | nil.        | nil.         | S.R.W.P.        | L.H.             | inside       | yes      | G. & B.                  | se.       | bad        | ?            | +       | —    | —      | B.   |    |
|               | 9       | u. j.         | s. d.       | nil.         | S.P.            | L.H. "Plug"      | outside      | yes      | G. & L.                  | se.       | bad        | ?            | +       | +    | +      | V.B. |    |
|               | 10      | ?             | ?           | yes          | S.R.W.P.        | Wash-out.        | out          | yes      | G.                       | se.       | ?          | dirty        | +       | +    | +      | B.   |    |
|               | 11      | u. j.         | w.          | no           | S.P.            | L.H. : C.P.      | out          | yes      | G.                       | se.       | good       | clean        | +       | —    | —      | B.   |    |
|               | 12      | u. j.         | —           | no           | S.R.W.P.        | L.H. : S.H.      | out          | yes      | G.                       | se.       | good       | clean        | +       | nil. | nil.   | V.G. |    |
|               | 13      | N. D.         | 1898.       | no           | S.R.W.P.        | S.H. : W.O.      | out          | yes      | G. & B.                  | se.       | good       | clean        | +       | nil. | nil.   | B.   |    |
|               | 14      | u. j.         | w.          | no           | none            | F.R.H.           | none         | yes      | G.                       | o.m.      | —          | —            | ?       | ?    | ?      | V.G. |    |
|               | 15      | N. D.         | 1897        | no           | none            | F.R.H.           | none         | yes      | G.                       | o.m.      | —          | —            | ?       | ?    | ?      | B.   |    |
|               | 16      | u. j.         | w.          | no           | none            | C.P.             | none         | yes      | G. & B.                  | se.       | bad        | clean        | ?       | nil. | —      | B.   |    |
|               | 17      | u. j.         | w.          | no           | none            |                  |              |          |                          |           |            |              |         |      |        |      | G. |
|               | 18      | clay.         | —           | no           | none            |                  |              |          |                          |           |            |              |         |      |        |      | G. |
|               | 19      | Q. P.         | exc. one    | W.W. P.      | P. out of order |                  |              |          |                          |           |            |              |         |      |        |      | B. |
|               | 20      | Q. P.         | exc. ven    | tilatin      | g m.b. cover    |                  |              |          |                          |           |            |              |         |      |        |      | G. |
|               | 21      | u. j.         | —           | no           | none            | L.H.             | none         | yes      | G.                       | o.m.      | bad        | dirty        | +       | —    | —      | B.   |    |
|               | 22      | —             | —           | yes          | S.P.            | L.H. : V. : W.O. | out          | yes      | G.                       | se.       | bad        | ?            | +       | +    | ?      | B.   |    |
|               | 23      | u. j.         | s. d.       | no           | S.R.W.P.        | L.H. : S.H.      | out          | one, no  | B.                       | se.       | good       | dirty        | +       | +    | +      | V.B. |    |
|               | 24      | u. j.         | s. d.       | no           | S.R.W.P.        | L.H. : V. : V.   | in           | yes      | B.                       | se.       | bad        | dirty        | +       | +    | +      | V.B. |    |
|               | 25      | u. j.         | —           | no           | S.R.W.P.        | L.H. : P.C.      | out          | 1 con'd. | B. & G.                  | se.       | ?          | ?            | +       | —    | —      | V.B. |    |
|               | 26      | ?             | ?           | yes          | S.R.W.P.        | V. : V.          | out          | yes      | G.                       | si.       | ?          | dirty        | +       | —    | —      | B.   |    |
|               | 27      | ?             | ?           | yes          | yes             | S.H. : S.H.      | in           | yes      | G.                       | se.       | ?          | clean        | +       | —    | +      | B.   |    |
|               | 28      | N. D.         | 1898        | no           | none            | S.H.             | none         | yes      | G.                       | se.       | bad        | clean        | ?       | —    | —      | V.G. |    |
|               | 29      | Q. P.         | —           | no           | none            | S.H.             | out          | yes      | G.                       | se.       | good       | clean        | +       | +    | —      | B.   |    |
|               | 30      | clay          | —           | no           | none            | S.H.             | none         | yes      | G.                       | se.       | good       | clean        | +       | —    | —      | B.   |    |
|               | 31      | u. j.         | w.          | no           | S.R.W.P.        | S.H.             | out          | yes      | G.                       | se.       | good       | clean        | +       | —    | —      | B.   |    |
|               | 32      | c. j.         | w.          | no           | none            | L.H.             | none         | yes      | G.                       | se.       | good       | clean        | +       | —    | —      | B.   |    |
|               | 33      | u. j.         | {w.<br>m.d. | no           | S.P.            | S.H. : C.P.      | in           | none.    | none.                    | se.       | bad        | clean        | +       | n.   | n.     | V.B. |    |
| SOUTH.        | 1       | c. j.         | —           | no           | S.R.W.P.        | C.P. : P.C.      | out          | yes      | G.                       | si.       | bad        | ?            | +       | —    | n.     | B.   |    |
|               | 2       | u. j.         | w.          | no           | S.R.W.P.        | L.H. : P.C. : V. | in           | yes      | G.                       | se.       | bad        | dirty        | +       | —    | n.     | B.   |    |
|               | 3       | ?             | ?           | yes          | yes             | L.H. : V. : V.   | in           | yes      | G.                       | se.       | good       | ?            | +       | —    | +      | B.   |    |
|               | 4       | clay          | —           | yes          | S.R.W.P.        | W.O. : W.O.      | in           | yes      | G.                       | se.       | good       | dirty        | +       | —    | n.     | B.   |    |
|               | 5       | b. b.         | w.          | no           | none            | C.P. : C.P.      | out          | yes      | G. & B.                  | se.       | good       | ?            | ?       | ?    | ?      | V.B. |    |
|               | 6       | c. j.         | {w.<br>m.d. | no           | none            | L.H.             | none         | yes      | G.                       | se.       | good       | clean        | +       | —    | —      | B.   |    |
|               | 7       | b. b. : u. j. | w.          | no           | none            | C.P.             | in           | no       | B.                       | se.       | good       | clean        | ?       | ?    | ?      | V.B. |    |

N. D. Recently drained.

Q. P. Everything apparently satisfactory.

EXPLANATIONS.

JOINTS—u. j. Pipes without jointing material.  
clay jointed with clay.  
c. j. cement.  
b. b. Brick barrel drain.

SOIL—m. d. Ground much discoloured with sewage.  
w. wet from leakage.  
s. slightly discoloured.

VENTILATION—S.R.W.P. Vent to drain (unventilated) by rain-water-pipe connected to top of soil pipe.  
S.P. soil pipe.

W.C.—L.H. Long hopper, pan and trap.  
S.H. Short do. do.  
C.P. Cottage pan and trap.  
F.R.H. Flush rim hopper.

P.C. Pan and container apparatus.  
W.O. Wash-out pan and trap.  
V. Valve apparatus.

G. Gully Trap.  
B. Bell do.  
L. Lip do.

TESTS.—  
? or — Test not used.  
+ " used with positive result.  
nil. " " negative "

W. Water test. WATER.—"si." Water from cistern supplying W.C.  
St. Chemical test. "se." Supply from cistern cut off W.C.  
S. Smoke Test. "o.m." Supply off rising main.

in "very bad." In South Paddington the 7 cases were divided between "bad" (5), and "very bad" (2). It would have been better to have ascertained the frequency of the disease in relation to the totals of each class of houses, but such information is not at present available. The results here set out indicate that there is a greater probability of cases occurring in "bad" than in "good" houses, and justifies the demand for the reconstruction of defective drainage. This view was adopted at the last International Congress of Hygiene and Demography, when the following resolution was (among others) adopted:—

That special measures should be taken in the construction of houses to prevent the access of ground air and moisture to the floors and walls.

That house drains should be arranged so as to avoid stagnation of their contents and to secure a rapid flow to the street sewer. They should be impervious to liquids and gases, freely and continuously ventilated, and provided with syphon traps to prevent the access of foul air to the houses. (*Madrid Congress, 1898.*)

Of the 76 cases reported, 55 were removed to hospital, equal to 72·3 per cent., as compared with percentages of 43·8, 37·1, 51·6, and 51·1 in the years 1894-97. Of children under five years of age, 85·7 per cent. went to hospital, and of patients at older ages, 71·1. Of patients residing in North Paddington, 77·7 per cent. went to hospital, and those residing in South, 46·1.

## PUERPERAL FEVER.

|                                    | Paddington. | London. |
|------------------------------------|-------------|---------|
| Cases reported, 1898 ... ..        | 5           | 250     |
| Average annual number, 1890-97 ... | 9           | 286     |
| Case-rate, 1898 ... ..             | 0·03        | 0·05    |

As in 1897, all the cases of this disease were from North Paddington, no case having occurred in South Paddington since 1894. In the nine years, 1890-98, 65 cases have occurred in the Northern, as against 4 in Southern District. In the former area 22,538 births were registered during that period, and in the latter, 4,116, giving a case rate, per 1,000 births registered, of 2·66 and 0·96 respectively. Fewer cases were reported from North Paddington in 1891 (4) and 1894 (3), the total for each of the remaining years being in excess of that of last year. The maximum (15) was recorded in 1893. In South Paddington 3 cases were recorded in 1893, and one in 1894. In Paddington the reduction from the average was equal to 44·5 per cent., as compared with 12·6 in the Metropolis.

An examination of the information obtained in connection with last year's cases shows that in 4 the labour was more or less complicated, requiring the attendance of more than one medical practitioner; that there were different practitioners, midwives, and nurses in each case; that 3 of the patients resided in basement rooms; and that the condition of the houses was described as "clean" or "very clean" in four out the five, the state of the fifth house not being specified. The sanitary condition *i.e.*, as regards

drains, &c., was found to be excellent in one case, "bad" in a second, and "very bad" in the remaining three. The nurse in one case was an amateur, a friend acting through goodwill. She had never assisted at a confinement before, and her appearance when seen (*quâ* dirt) was such that it is to be hoped that she will never act as nurse to a puerperal woman again. One case occurred next door to a house, the drain of which had been opened for examination two days prior to the confinement, and was not properly covered in when that event came off. It is almost unnecessary to remark that had the prospective confinement been known, the examination would not have been made.

### SCHOOL ATTENDANCE.

It is generally admitted that school attendance plays no inconsiderable part in the spread of scarlet fever and diphtheria. In former years cases of infectious disease reported among children attending each school have been recorded without making any allowance for other factors, such as imported infection, return cases, &c. On the present occasion, all cases which could be classified as "return," "imported," or "secondary," and all known to have been erroneously diagnosed, have been excluded, and only those remaining have been tabulated in Table 11. In the case of non-parishioners, being children residing beyond the Parish boundaries, but attending local schools, such elimination has not been possible, and all cases reported have been tabulated. When there is a

succession of cases at close intervals from any given school, especially if the patients be in the same class, or about the same age, there is a strong presumption that there has been a transference of infection from child to child, owing to the contact occasioned by school attendance, such transference being possible either in the class-room, playground, or street. It would unduly lengthen this report to enter into details of all the schools mentioned in the Table, and it will perhaps suffice to consider the cases from the school, in connection with which the largest number of cases was recorded during the year.

*Harrow Road Board*\*. There were 12 primary cases of diphtheria among children attending this school, the origin of the infection in each case not being attributable to any definite source. At this school the girls and infants use the same play-ground and entrance. The cases occurred in the following succession :—

#### GIRLS' AND INFANTS' SCHOOLS.

| Sex and Age. | Sickened.   | Attended last. | Sex and Age. | Sickened. | Attended last. |
|--------------|-------------|----------------|--------------|-----------|----------------|
| m. 4         | 3 vii.      | 1 vii.         | f. 11        | 20 x.     | 20 x.          |
| f. 11        | 4 vii.      | 4 vii.         | f. 10        | 3 xi.     | 3 xi.          |
|              | (Holidays.) |                | f. 9         | 9 xi.     | 15 xi.         |
| m. 6         | 15 ix.      | 15 ix.         | m. 6         | 26 xi.    | 25 xi.         |
| m. 7         | 18 ix.      | 16 ix.         | f. 6         | 30 xi.    | 30 xi.         |
| f. 13        | 14 x.       | 14 x.          | f. 7         | 20 xii.   | 20 xi.         |

#### BOYS' SCHOOL.

| Sex and Age. | Sickened. | Attended last. |
|--------------|-----------|----------------|
| m. 10.       | 19 x.     | 19 x.          |

\* As regards the attendance at this school (the largest in the Parish) see Table 11.

There were, further, 9 primary cases of diphtheria reported among members of families sending children (other than the patients) to this school. If these be added, and the cases arranged in order of dates of sickening of the patients, the series becomes :—

GIRLS' AND INFANTS' SCHOOLS.

|                     |        |          |           |
|---------------------|--------|----------|-----------|
| 3 vii.              | 15 ix. | 9 xi.    | 30 xi.    |
| 4 vii.              | 18 ix. | (13 xi.) | (4 xii.)  |
| (7 vii.)            | 14 x.  | 26 xi.   | (15 xii.) |
| (28 vii.)           | 20 x.  | (27 xi.) | 20 xii.   |
| Holidays (18 viii.) | 3 xi.  |          |           |

NOTE.—The cases shown thus “ (7 vii.) ” are those of children or others not attending the school, but members of families sending children to it.

There are, however, two important points which should not be lost sight of, namely, the impossibility of excluding undiscovered sources of infection quite independent of the school, and the lack of definite knowledge as to the frequency of error of diagnosis. It must suffice to say that the series as made out is very suggestive.

In the case of scarlet fever, the following is the list of attacks among those in actual attendance at the school:—

GIRLS' AND INFANTS' SCHOOLS.

| Sex & Age. | Date of Sickening. | Last Attendance. | Sex & Age. | Date of Sickening. | Last Attendance. |
|------------|--------------------|------------------|------------|--------------------|------------------|
| f. 9       | 31 i.              | 28 i.            | m. 7       | 24 vii.            | 21 vii.          |
| f. 5       | 28 ii.             | 25 ii.           |            | Holidays.          |                  |
| m. 5       | 10 iii.            | 10 iii.          | m. 4       | 26 viii.           | 26 viii.         |
| f. 7       | 12 iii.            | 11 iii.          | f. 3       | 30 viii.           | 26 viii.         |
| m. 6       | 7 v.               | 29 iv. (?)       | m. 7       | 2 ix.              | 2 ix.            |
| f. 5       | 21 v.              | 18 v.            | m. 4       | 3 ix.              | 2 ix.            |
| f. 13      | 17 vi.             | 17 vi.           | m. 6       | 29 ix.             | 29 ix.           |
| m. 6       | 2 vii.             | 1 vii.           | f. 4       | 6 x.               | 6 x.             |
| m. 5       | 3 vii.             | 1 vii.           | f. 6       | 23 xi.             | 22 xi.           |

## BOYS' SCHOOL.

| Sex and Age. | Date of Sickening. | Last Attendance. |
|--------------|--------------------|------------------|
| m. 10        | 8 vi.              | 8 vi.            |
| m. 9         | 14 vii.            | 14 vii.          |

If the cases among children not attending school, but in houses whence others attended the school be added, and the whole arranged as before, the series becomes as follows :—

## GIRLS' AND INFANTS' SCHOOLS.

|          |          |             |          |
|----------|----------|-------------|----------|
| 31 i.    | 10 iii.  | 2 vii.      | 30 viii. |
| (2 ii.)  | 12 iii.  | 3 vii.      | 3 ix.    |
| (16 ii.) | 7 v.     | 24 vii.     | 29 ix.   |
| (22 ii.) | 21 v.    | (Holidays.) | 6 x.     |
| 23 ii.   | (11 vi.) | 26 viii.    | 23 xi.   |
| (4 iii.) | 17 vi.   |             |          |

NOTE.—The cases shown thus “(    )” are those of children or others not attending the school, but members of families sending children to it.

This series is not so suggestive of transference of infection in connection with the school as was that of the diphtheria cases. Both as regards diphtheria and scarlet fever the Boys' School appears to have enjoyed almost complete immunity.

For some time past an exchange of information as to infectious disease in connection with schools has been regularly effected with the adjoining districts. During the year 70 cases of diphtheria and scarlet fever have been reported from those districts, viz., 37 from Willesden, 25 from Kensington, and 4 each from St. Marylebone and Chelsea. Further information of these cases is to be found in Table 11.

TABLE 11.  
Infectious Illness and School Attendances.

|                  |                             | DIPHTHERIA. |         |           | SCARLET FEVER. |         |           | Average Attendance. |
|------------------|-----------------------------|-------------|---------|-----------|----------------|---------|-----------|---------------------|
|                  |                             | Scholars.   | Others. | Non-Pars. | Scholars.      | Others. | Non-Pars. |                     |
| BOARD.           | Amberley Road ...           | 3           | 4       | —         | 9              | —       | —         | 768                 |
|                  | Campbell Street ...         | 7           | 3       | 3         | 4              | —       | 1         | 717                 |
|                  | Essendine Road ...          | 4           | 5       | —         | 1              | —       | —         | 359                 |
|                  | Harrow Road ...             | 12          | 9       | —         | 19             | 5       | 5         | 1,275               |
|                  | Totals ...                  | 26          | 21      | 3         | 33             | 5       | 6         | 3,119               |
| CHURCH SCHOOLS.  | All Saints' ...             | —           | —       | —         | 1              | —       | —         | 196                 |
|                  | Cirencester Street, R.C.... | —           | 1       | —         | —              | —       | —         | 147                 |
|                  | Holy Trinity ...            | 1           | 2       | —         | 3              | 1       | —         | 515                 |
|                  | St. Augustine ...           | 1           | 2       | 2         | 1              | —       | 11        | 1,872               |
|                  | St. James ...               | —           | —       | —         | 1              | —       | —         | 301                 |
|                  | St. John ...                | —           | —       | —         | 4              | —       | —         | 406                 |
|                  | St. Luke, Kilburn ...       | 2           | 3       | 4         | 1              | 1       | 4         | 547                 |
|                  | St. Luke, Westbourne Pk.    | —           | —       | 1         | —              | —       | 5         | 133                 |
|                  | St. Mary ...                | —           | —       | —         | 1              | 1       | —         | 464                 |
|                  | St. Mary of the Angels ...  | —           | 1       | 1         | —              | —       | 1         | 88                  |
|                  | St. Mary Magdalene ...      | —           | 2       | —         | 1              | 2       | —         | 925                 |
|                  | St. Matthew ...             | —           | —       | 2         | 1              | 1       | 2         | 471                 |
|                  | St. Michael ...             | —           | —       | —         | 7              | 1       | —         | 497                 |
|                  | St. Paul ...                | 1           | —       | —         | 1              | 4       | —         | 461                 |
|                  | St. Peter ...               | 3           | 4       | —         | 7              | 2       | —         | 703                 |
|                  | St. Saviour ...             | 7           | 1       | —         | 9              | 3       | —         | 428                 |
|                  | St. Stephen ...             | —           | 1       | 2         | 1              | 2       | —         | 303                 |
|                  | Saltram Crescent ...        | 4           | 6       | 4         | 7              | 1       | 1         | 275                 |
|                  | Westbourne ...              | 2           | 2       | —         | 4              | —       | 2         | 702                 |
|                  | Wilberforce ...             | 5           | 3       | —         | 1              | 1       | —         | 573                 |
|                  | Totals ...                  | 26          | 28      | 35        | 51             | 20      | 26        | 10,007              |
| Grand Totals ... |                             | 52          | 49      | 38        | 87             | 25      | 32        | 14,126              |

The above figures indicate the following frequencies per 1,000 attendances.

|                                   |     | Diphtheria. | Scarlet Fever. |
|-----------------------------------|-----|-------------|----------------|
| Board Schools (Scholars only) ... | ... | 8·3         | 10·5           |
| Church Schools (do. ) ...         | ... | 2·5         | 5·0            |

## RETURN CASES.

There were in all 18 cases of infectious illness following the return home of patients sent to hospital for isolation, 11 after scarlet fever and 7 after diphtheria. All the former and three of the latter were carefully investigated, and the results are to be found tabulated in Appendix B., at the end of this report. At the beginning of October, Prof. Simpson, late Medical Officer of Health of Calcutta, was engaged by the Asylums Board to make a special investigation into the matter. All cases subsequent to his appointment were jointly investigated with him.

In connection with the return cases of scarlet fever, the most frequent feature appears to be the occurrence in the home-coming patient of nasal catarrh, usually associated with cracks round the nostrils, and enlargement of the glands of the neck. In several cases, the patients appear to have had colds immediately after their return home. It would appear that the infection was derived from the nose and throat rather than the desquamation. The cases of return diphtheria have been too few to warrant any deduction (even the most provisional) being made on this occasion. In the latter cases, bacteriological examinations of swabs from the throats of the returned patients have been made, but the results obtained, up to the end of the year, were negative.

## INTER-NOTIFICATION.

Whenever there appeared to be any suspicion of infection having been imported from an outside district, the medical officer of health of that district has been duly notified of the fact, both with a view to obtaining further information, and to warn him of possible centres of infection in his district.

## DEATHS.

During the year 2,186 deaths, 1,109 of males and 1,077 of females, were registered within the Parish, equivalent to an uncorrected rate of 17·12 per 1,000 of the estimated population at all ages, as compared with rates of 15·78, 18·32, 16·57, and 15·37 recorded in the years 1894-97 respectively. Last year's total included (among others) 1,011 deaths from local diseases, 436 from constitutional, 387 from zymotic, and 152 from developmental. The 387 deaths from the zymotic diseases included 99 from diarrhœa, 95 from measles, 45 from whooping cough, 31 from diphtheria, 15 from enteric (or typhoid) fever, and 2 from scarlet fever, equivalent to an uncorrected zymotic rate of 2·24 per 1,000. To epidemic influenza were attributed 66 deaths, to cancer 133, and to the tubercular diseases 270. The uncorrected infantile mortality was 169 per 1,000 births registered.

The foregoing figures include 330 deaths of non-parishioners, and take no account of 174 deaths of parishioners registered beyond the Parish. By

deducting the former and adding the latter, a corrected total of 2,030\* deaths of parishioners is obtained, which total will be alone used throughout this report. From this corrected total the commonly-called "corrected" death-rate is calculated, but for the purposes of comparison, further correction for the sex-age constitution of the population of the Parish is required, as will be more particularly explained further on.

The 2,030 deaths of parishioners during the year comprised 1,005 of males and 1,025 of females, and were equivalent to a rate of 15·80 per 1,000 of the population, as compared with a mean rate for the preceding quinquennium of 15·93. The death-rate among males was 19·02 per 1,000 (males) living, and that among females, 13·69, the former being above, the latter below, the respective quinquennial mean. (See Table 12.) The death-rates for the year were in excess of the respective means in North Paddington, but below in South. In comparison with the preceding ten years, the corrected total (2,030) for the Parish was 53 above the average (1,977), whilst the rate (15·89) was 0·51 below the mean (16·40). In North Paddington the deaths (1,663) were 123 above the decennial average (1,540), and the rate (17·64), 0·19 below the mean (17·83). In South

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\* The corrected total obtained by the Registrar-General was 2,041, or 11 more than that recorded in the office, and the death-rate 16·1 per 1,000, 0·3 higher than that calculated by the Department.

TABLE 12.  
Deaths of Parishioners.

| Deaths recorded<br>1898. | Paddington. |          |                | St. Mary. |          |                | St. John. |          |                |       |
|--------------------------|-------------|----------|----------------|-----------|----------|----------------|-----------|----------|----------------|-------|
|                          | Males.      | Females. | Both<br>Sexes. | Males.    | Females. | Both<br>Sexes. | Males.    | Females. | Both<br>Sexes. |       |
| 1st Quarter ... ..       | 264         | 337      | 601            | 225       | 268      | 493            | 39        | 69       | 108            |       |
| 2nd „ ... ..             | 228         | 235      | 463            | 183       | 184      | 367            | 45        | 51       | 96             |       |
| 3rd „ ... ..             | 252         | 239      | 491            | 212       | 196      | 408            | 40        | 43       | 83             |       |
| 4th „ ... ..             | 261         | 214      | 475            | 225       | 170      | 395            | 36        | 44       | 80             |       |
| Year ... ..              | 1005        | 1045     | 2030           | 845       | 818      | 1663           | 160       | 207      | 367            |       |
| Rates 1898               | 19·02       | 13·69    | 15·89          | 20·64     | 15·34    | 17·64          | 13·43     | 9·61     | 10·97          |       |
| Mean Rates<br>1893—1897. | 18·52       | 14·11    | 15·93          | 19·10     | 15·06    | 17·32          | 16·52     | 9·68     | 12·12          |       |
| Death-Rates {            | 1897        | 17·35    | 12·20          | 14·33     | 17·86    | 14·00          | 15·68     | 15·60    | 7·84           | 10·60 |
|                          | 1896        | 18·58    | 13·06          | 15·34     | 19·82    | 15·00          | 17·09     | 14·46    | 8·41           | 10·57 |
|                          | 1895        | 19·58    | 15·34          | 17·09     | 20·26    | 17·05          | 18·44     | 17·27    | 11·10          | 13·30 |
|                          | 1894        | 17·22    | 13·55          | 15·06     | 17·73    | 15·18          | 16·29     | 15·52    | 9·63           | 11·73 |
|                          | 1893        | 19·87    | 16·44          | 17·86     | 19·87    | 18·58          | 19·14     | 19·87    | 11·42          | 14·43 |

\* Rates per 1,000 individuals in each group.

Paddington the total for the year was 367, as compared with an annual average for the preceding ten years of 437, showing a reduction of 70, and the rate for the year (10·97) was 1·76 below the mean (12·73). (See Table 13.) In England and Wales the death-rate was 17·6 per 1,000, or 0·8 below the decennial mean, and in London 18·7, or 1·0 below the mean.

In the foregoing comparison, no note has been taken of the differences in the sex and age constitutions of the different populations. Proper factors have

TABLE 13.

Deaths and Death-rates, 1888-1898.

| Years.                 | Paddington. |        | St. Mary. |        | St. John. |        | Death-rates.       |          |
|------------------------|-------------|--------|-----------|--------|-----------|--------|--------------------|----------|
|                        | Regd.       | Rates. | Rgd.      | Rates. | Regd.     | Rates. | England and Wales. | London.* |
| 1898 ... ..            | 2,030       | 15.89  | 1,663     | 17.64  | 367       | 10.97  | 17.6               | 18.7     |
| 1888 ... ..            | 1,916       | 16.55  | 1,472     | 18.64  | 444       | 12.06  | 18.1               | 19.3     |
| 1889 ... ..            | 1,664       | 14.21  | 1,266     | 15.76  | 398       | 10.83  | 18.2               | 18.4     |
| 1890 ... ..            | 2,104       | 17.71  | 1,602     | 19.51  | 502       | 13.69  | 19.5               | 21.4     |
| 1891 ... ..            | 2,110       | 17.90  | 1,590     | 18.89  | 520       | 15.43  | 20.2               | 21.5     |
| 1892 ... ..            | 2,142       | 17.96  | 1,632     | 18.95  | 510       | 15.38  | 19.0               | 20.7     |
| 1893 ... ..            | 2,153       | 17.86  | 1,680     | 19.14  | 473       | 14.43  | 19.2               | 21.3     |
| 1894 ... ..            | 1,831       | 15.06  | 1,449     | 16.29  | 382       | 11.73  | 16.6               | 17.8     |
| 1895 ... ..            | 2,099       | 17.09  | 1,671     | 18.44  | 428       | 13.30  | 18.7               | 19.9     |
| 1896 ... ..            | 1,942       | 15.34  | 1,583     | 17.09  | 359       | 10.57  | 17.1               | 18.6     |
| 1897 .. ..             | 1,810       | 14.33  | 1,455     | 15.68  | 355       | 10.60  | 17.4               | 18.2     |
| Averages<br>1888-97. } | 1,977       | 16.40  | 1,540     | 17.83  | 437       | 12.73  | 18.4               | 19.7     |

been obtained for this correction, and in Table 14 the fully-corrected death-rates of this Parish and certain other districts of the Metropolis are set out in comparison. Of the districts included therein, Hampstead with a rate of 13.47 stands first, while of those included among the Western Areas of the Metropolis, St. George, Hanover Square, had the lowest rate (14.57), that of Paddington (17.39) coming next.

In each of the three years dealt with the local rate was below the "standard" rate, which is based on the mortality which prevailed in the whole country during the inter-censal period 1881-91.

TABLE 14.

Comparison of "Corrected" Death-rates, 1898.

|                         | Standard<br>Death-rate<br>per 1,000. | Re-<br>corded<br>Death-<br>rate,<br>1898. | Corrected Rates. |       |       | Infantile Mortality per<br>1,000 births. |       |       |
|-------------------------|--------------------------------------|-------------------------------------------|------------------|-------|-------|------------------------------------------|-------|-------|
|                         |                                      |                                           | 1898.            | 1897. | 1896. | 1898.                                    | 1897. | 1896. |
| England and Wales ...   | 19.15                                | 17.6                                      | 17.6             | 17.4  | 17.1  | 161                                      | 156   | 148   |
| London ...              | 17.96                                | 18.3                                      | 19.51            | 18.87 | 19.40 | 166                                      | 158   | 160   |
| WEST—                   |                                      |                                           |                  |       |       |                                          |       |       |
| Paddington ...          | 17.72                                | 16.1                                      | 17.39            | 15.56 | 16.53 | 161                                      | 149   | 156   |
| Kensington ...          | 17.38                                | 16.4                                      | 18.07            | 17.29 | 18.51 | 181                                      | 166   | 178   |
| Hammersmith ...         | 18.05                                | 18.3                                      | 19.41            | 17.71 | 18.24 | 183                                      | 171   | 179   |
| Fulham ...              | 18.27                                | 17.2                                      | 18.02            | 17.81 | 18.44 | 168                                      | 162   | 175   |
| Chelsea ...             | 17.95                                | 18.2                                      | 19.41            | 18.98 | 20.05 | 176                                      | 161   | 168   |
| St. George, Hanover Sq. | 17.34                                | 13.2                                      | 14.57            | 14.57 | 15.01 | 120                                      | 133   | 149   |
| NORTH—                  |                                      |                                           |                  |       |       |                                          |       |       |
| Marylebone ...          | 17.82                                | 18.3                                      | 19.66            | 19.66 | 21.38 | 132                                      | 136   | 141   |
| Hampstead ...           | 16.63                                | 11.7                                      | 13.47            | 13.58 | 13.70 | 125                                      | 127   | 123   |
| St. Pancras ...         | 17.89                                | 19.2                                      | 20.55            | 20.01 | 19.37 | 170                                      | 168   | 168   |
| Islington ...           | 17.90                                | 16.6                                      | 17.75            | 16.90 | 18.29 | 159                                      | 136   | 150   |
| Hackney ...             | 18.23                                | 16.4                                      | 17.22            | 17.33 | 16.49 | 152                                      | 147   | 146   |
| EAST—                   |                                      |                                           |                  |       |       |                                          |       |       |
| Shoreditch ...          | 18.45                                | 22.3                                      | 23.14            | 22.41 | 22.21 | 196                                      | 183   | 180   |
| Bethnal Green ...       | 18.39                                | 22.3                                      | 23.22            | 22.28 | 23.01 | 184                                      | 171   | 170   |
| Whitechapel ...         | 17.74                                | 20.2                                      | 21.80            | 22.02 | 22.23 | 144                                      | 148   | 141   |
| St. George in the East  | 18.43                                | 24.8                                      | 25.76            | 27.43 | 25.45 | 195                                      | 197   | 154   |
| Mile End, Old Town...   | 18.58                                | 19.9                                      | 20.51            | 19.27 | 20.61 | 155                                      | 149   | 157   |
| Poplar...               | 18.49                                | 21.2                                      | 21.95            | 20.50 | 21.33 | 191                                      | 170   | 176   |
| SOUTH—                  |                                      |                                           |                  |       |       |                                          |       |       |
| Newington ..            | 18.32                                | 20.5                                      | 21.42            | 22.16 | 21.42 | 173                                      | 177   | 184   |
| Lambeth ...             | 18.24                                | 17.9                                      | 18.79            | 18.37 | 17.74 | 154                                      | 151   | 136   |
| Battersea ...           | 17.80                                | 16.9                                      | 18.18            | 17.42 | 19.04 | 166                                      | 162   | 177   |
| Wandsworth ..           | 17.93                                | 14.4                                      | 15.37            | 14.31 | 15.27 | 144                                      | 135   | 150   |
| Camberwell ...          | 18.10                                | 16.4                                      | 17.35            | 17.56 | 18.83 | 160                                      | 159   | 156   |

## AGE-GROUP DEATH-RATES.

Tables 15 and 15A give the death-rates which prevailed last year among males and females in the six age-groups used in these reports, the rates being contrasted with those prevailing during each of the preceding five years, and the mean rate for the quinquennial period. In Table 16 the deaths at ages under one year have been tabulated in four age-groups, and those at ages between one and five years, for each year of life. Inasmuch as estimates of persons living at ages under one year are untrustworthy, more importance is to be attached to the infantile mortality rates shown in Table 16 than to those in Tables 15 and 15A.\*

Among males the increase in the death-rate during the year was chiefly due to the heavier mortality in North Paddington, all rates except that of the group "5—15" being above the average. (See Table 15). In South Paddington the rate at ages under one year alone showed an increase over the mean. The reduction in the rate prevailing in this Sub-district at ages "15—25," from 3·57 to 1·49, was very satisfactory. In the whole Parish the bulk of the increased mortality fell on the ages "under one" and "1—5," the other increases being in each case trifling. As will appear later on, these increases were due largely to the prevalence of measles and diarrhoea.

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\* See also under "Mortality of Infants under one year" page 77 *et seq.*

TABLE 15.

Death-rates per 1,000 estimated living in each group.

## MALES.

| Age Groups. |               | 1893.  | 1894.  | 1895.  | 1896.  | 1897   | Means<br>1893-97. | 1898.  |
|-------------|---------------|--------|--------|--------|--------|--------|-------------------|--------|
| Paddington. | 0-1 ...       | 190.47 | 173.32 | 211.18 | 215.57 | 180.21 | 194.15            | 225.58 |
|             | 1-5 ...       | 28.80  | 28.26  | 21.42  | 31.92  | 21.29  | 26.33             | 31.54  |
|             | 5-15 ...      | 3.95   | 3.60   | 2.64   | 3.26   | 4.05   | 3.50              | 3.81   |
|             | 15-25 ...     | 3.63   | 4.70   | 3.86   | 2.88   | 3.08   | 3.63              | 3.23   |
|             | 25-65 ...     | 16.08  | 13.75  | 16.32  | 13.50  | 14.15  | 14.76             | 13.08  |
|             | 65 & over ... | 97.30  | 64.66  | 95.62  | 78.39  | 80.57  | 83.30             | 84.14  |
|             | All ages ...  | 19.87  | 17.22  | 19.58  | 18.58  | 17.35  | 18.52             | 19.02  |
|             | 0-5 ...       | 64.48  | 60.27  | 63.31  | 72.43  | 56.39  | 63.37             | 74.40  |
|             | 5-65 ...      | 10.39  | 9.31   | 10.28  | 8.67   | 9.25   | 9.58              | 8.65   |
|             | 5 & over ...  | 14.20  | 11.74  | 14.00  | 11.72  | 12.37  | 12.80             | 11.95  |
| St. Mary.   | 0-1 ...       | 205.12 | 182.58 | 211.59 | 216.03 | 186.71 | 200.40            | 233.42 |
|             | 1-5 ...       | 28.75  | 29.98  | 24.08  | 33.51  | 21.69  | 27.60             | 34.98  |
|             | 5-15 ...      | 3.59   | 3.03   | 2.73   | 3.52   | 4.00   | 3.37              | 3.82   |
|             | 15-25 ...     | 3.56   | 4.73   | 3.72   | 3.25   | 2.98   | 3.64              | 3.83   |
|             | 25-65 ...     | 14.65  | 13.34  | 16.47  | 14.27  | 14.57  | 14.66             | 14.13  |
|             | 65 & over ... | 98.74  | 63.95  | 98.50  | 83.08  | 77.29  | 84.31             | 85.73  |
|             | All ages ...  | 19.87  | 17.73  | 20.26  | 19.82  | 17.86  | 19.10             | 20.64  |
|             | 0-5 ...       | 68.52  | 64.39  | 66.34  | 74.64  | 58.89  | 64.57             | 79.71  |
|             | 5-65 ...      | 9.45   | 8.98   | 10.23  | 9.44   | 9.37   | 9.49              | 9.28   |
|             | 5 & over ...  | 13.07  | 11.21  | 13.82  | 12.16  | 12.13  | 12.47             | 12.39  |
| St. John.   | 0-1 ...       | 107.52 | 119.56 | 208.79 | 212.88 | 142.10 | 158.17            | 178.94 |
|             | 1-5 ...       | 29.02  | 19.92  | 8.06   | 24.18  | 19.37  | 20.11             | 14.23  |
|             | 5-15 ...      | 5.47   | 5.50   | 2.22   | 2.11   | 4.28   | 3.91              | 3.75   |
|             | 15-25 ...     | 3.81   | 4.61   | 4.27   | 1.84   | 3.36   | 3.57              | 1.49   |
|             | 25-65 ...     | 20.31  | 14.63  | 15.87  | 10.90  | 12.86  | 14.91             | 9.78   |
|             | 65 & over ... | 93.91  | 66.54  | 88.49  | 67.11  | 88.58  | 85.92             | 80.20  |
|             | All ages ...  | 19.87  | 15.52  | 17.27  | 14.46  | 15.60  | 16.54             | 13.43  |
|             | 0-5 ...       | 44.49  | 39.38  | 47.51  | 61.33  | 43.56  | 47.25             | 46.72  |
|             | 5-65 ...      | 13.39  | 10.40  | 10.43  | 7.12   | 8.87   | 10.04             | 6.56   |
|             | 5 & over ...  | 17.70  | 13.41  | 14.61  | 10.34  | 13.14  | 13.84             | 10.50  |

TABLE 15A.

Death-rates per 1,000 estimated living in each group.

## FEMALES.

| Age Groups. |               | 1893.  | 1894.  | 1895.  | 1896.  | 1897.  | Means<br>1893-97. | 1898.  |
|-------------|---------------|--------|--------|--------|--------|--------|-------------------|--------|
| Paddington. | 0-1 ...       | 166.79 | 128.93 | 168.05 | 144.41 | 157.08 | 133.05            | 129.54 |
|             | 1-5 ...       | 25.83  | 29.32  | 23.49  | 29.63  | 15.46  | 24.74             | 29.49  |
|             | 5-15 ...      | 4.06   | 4.68   | 3.31   | 4.05   | 3.41   | 3.90              | 2.82   |
|             | 15-25 ...     | 3.01   | 2.49   | 2.47   | 2.21   | 1.62   | 2.36              | 2.26   |
|             | 25-65 ...     | 11.78  | 9.48   | 9.99   | 8.80   | 7.73   | 9.55              | 8.68   |
|             | 65 & over ... | 88.62  | 64.25  | 90.43  | 58.63  | 69.25  | 74.23             | 79.85  |
|             | All ages ...  | 16.45  | 13.55  | 15.34  | 13.06  | 12.20  | 14.12             | 13.69  |
|             | 0-5 ...       | 57.27  | 51.54  | 55.77  | 55.33  | 47.07  | 53.39             | 51.89  |
|             | 5-65 ...      | 8.20   | 6.85   | 8.51   | 6.28   | 6.97   | 7.36              | 6.02   |
|             | 5 & over ...  | 12.82  | 10.16  | 13.23  | 9.29   | 9.09   | 10.91             | 10.27  |
| St. Mary.   | 0-1 ...       | 173.99 | 136.40 | 173.91 | 151.84 | 168.97 | 161.02            | 132.13 |
|             | 1-5 ...       | 27.58  | 30.40  | 25.92  | 31.25  | 17.12  | 26.45             | 32.46  |
|             | 5-15 ...      | 4.26   | 5.04   | 3.53   | 3.57   | 3.10   | 3.90              | 3.17   |
|             | 15-25 ...     | 3.74   | 2.65   | 2.97   | 2.63   | 2.08   | 2.81              | 2.68   |
|             | 25-65 ...     | 13.14  | 10.56  | 11.03  | 10.67  | 8.64   | 10.80             | 9.49   |
|             | 65 & over ... | 91.98  | 64.74  | 89.43  | 57.61  | 72.93  | 75.33             | 81.46  |
|             | All ages ...  | 18.60  | 15.18  | 17.05  | 15.00  | 14.00  | 15.96             | 15.34  |
|             | 0-5 ...       | 60.96  | 54.56  | 59.62  | 58.74  | 51.71  | 57.11             | 55.18  |
|             | 5-65 ...      | 9.08   | 7.53   | 7.58   | 7.30   | 5.94   | 7.48              | 6.57   |
|             | 5 & over ...  | 14.07  | 10.97  | 12.50  | 10.33  | 9.97   | 11.56             | 11.08  |
| St. John.   | 0-1 ...       | 126.90 | 86.73  | 134.02 | 102.56 | 89.10  | 107.86            | 114.42 |
|             | 1-5 ...       | 17.67  | 24.16  | 11.58  | 21.95  | 7.42   | 16.55             | 14.85  |
|             | 5-15 ...      | 3.31   | 3.33   | 2.41   | 5.94   | 4.64   | 3.92              | 1.39   |
|             | 15-25 ...     | 1.63   | 2.19   | 1.48   | 1.04   | 0.71   | 1.41              | 1.42   |
|             | 25-65 ...     | 8.98   | 7.20   | 7.73   | 4.88   | 5.81   | 6.29              | 6.92   |
|             | 65 & over ... | 79.88  | 63.08  | 93.13  | 61.31  | 59.37  | 71.35             | 75.47  |
|             | All ages ...  | 11.42  | 9.64   | 11.10  | 8.41   | 7.84   | 9.68              | 9.61   |
|             | 0-5 ...       | 39.43  | 36.65  | 36.04  | 38.05  | 23.76  | 34.78             | 34.68  |
|             | 5-65 ...      | 6.24   | 5.33   | 5.34   | 3.99   | 4.21   | 5.02              | 4.72   |
|             | 5 & over ...  | 10.04  | 8.31   | 9.87   | 6.95   | 7.06   | 8.44              | 8.38   |

TABLE 16.

|                           |                                                                          | MALES.      |       |           |       |           |       | FEMALES.    |       |           |       |           |       |
|---------------------------|--------------------------------------------------------------------------|-------------|-------|-----------|-------|-----------|-------|-------------|-------|-----------|-------|-----------|-------|
|                           |                                                                          | PADDINGTON. |       | ST. MARY. |       | ST. JOHN. |       | PADDINGTON. |       | ST. MARY. |       | ST. JOHN. |       |
|                           |                                                                          | Aver.*      | 1898. | Aver.     | 1898. | Aver.     | 1898. | Aver.       | 1898. | Aver.     | 1898. | Aver.     | 1898. |
| Births Registered .. ...  |                                                                          | 1,529       | 1,513 | 1,292     | 1,294 | 237       | 219   | 1,451       | 1,452 | 1,251     | 1,264 | 200       | 188   |
| Deaths.                   | Under 1 day ... ..                                                       | 22          | 27    | 19        | 24    | 3         | 3     | 17          | 22    | 14        | 19    | 3         | 3     |
|                           | 1 day and under 1 week ...                                               | 22          | 27    | 19        | 25    | 3         | 2     | 16          | 14    | 14        | 11    | 2         | 3     |
|                           | 1 week and under 1 month                                                 | 31          | 31    | 28        | 27    | 3         | 4     | 27          | 16    | 24        | 15    | 3         | 1     |
|                           | 1 month and under 1 year                                                 | 172         | 213   | 152       | 188   | 20        | 25    | 143         | 126   | 129       | 110   | 14        | 16    |
|                           | Totals under 1 year ... ..                                               | 247         | 298   | 218       | 264   | 29        | 34    | 203         | 178   | 181       | 155   | 22        | 23    |
|                           | Infantile Mortality under<br>1 year, per 1,000<br>births registered ...) | 161         | 196   | 168       | 204   | 121       | 155   | 139         | 122   | 144       | 122   | 110       | 122   |
|                           | 1-2 years ... ..                                                         | 58          | 76    | 52        | 73    | 6         | 3     | 51          | 77    | 45        | 72    | 6         | 5     |
|                           | 2-3 " ... ..                                                             | 26          | 31    | 22        | 28    | 4         | 3     | 27          | 32    | 24        | 28    | 3         | 4     |
|                           | 3-4 " ... ..                                                             | 20          | 23    | 17        | 19    | 3         | 4     | 20          | 21    | 19        | 19    | 1         | 2     |
|                           | 4-5 " ... ..                                                             | 14          | 17    | 12        | 16    | 2         | 1     | 16          | 11    | 13        | 10    | 3         | 1     |
| Total 1-5 years ... ..    |                                                                          | 118         | 147   | 103       | 136   | 15        | 11    | 114         | 141   | 101       | 129   | 13        | 12    |
| Grand Total under 5 years |                                                                          | 365         | 445   | 321       | 400   | 44        | 45    | 317         | 319   | 282       | 284   | 35        | 35    |

\* Quinquennial averages (1893-97) adjusted to nearest whole number in each case.

Among females, increased mortalities, compared with the quinquennial means, were recorded at ages "1—5" and "65 and over" in Paddington and St. Mary, and at ages "under one year" and "65 and over" in St. John. At all other ages the rates for last year were lower than, or equal to, the corresponding means.

The waste of young lives in the northern division of the Parish will be seen at once by a perusal of the subjoined figures :—

#### MORTALITIES, 1898.

| Per 1,000 living.               | 0—1.   |          | 1—5.   |          | Total<br>under 5 years. |          |
|---------------------------------|--------|----------|--------|----------|-------------------------|----------|
|                                 | Males. | Females. | Males. | Females. | Males.                  | Females. |
| North ...                       | 233·42 | 132·13   | 34·98  | 32·46    | 79·71                   | 55·18    |
| South ...                       | 178·94 | 114·42   | 14·23  | 14·85    | 46·72                   | 34·68    |
| Excess of North<br>over South } | 54·48  | 17·71    | 20·75  | 17·61    | 32·99                   | 20·50    |

An examination of the figures in Table 16 shows that there was a much heavier mortality among male infants, in comparison with the means for the preceding five years, than among female. As regards the latter, it was only in St. John that the mortality exceeded the mean. This Table shows that the greater part of the increased mortality fell on infants aged from one to twelve months. Speaking generally, higher rates of infantile mortality prevailed throughout the Metropolis (see Table 14), the exceptions being the rates for St. George, Hanover Square, where the mortality has steadily diminished during the

past three years ; St. Marylebone, where a similar reduction has occurred ; and Hampstead, where the rate has fluctuated. Of the districts included among the Western Areas, St. George, Hanover Square, had the lowest rate last year (120), that of Paddington (161), being next.

### CAUSES OF DEATH.

The numbers of deaths due to the various diseases are set out in Table III. in the Appendix, from which numbers the rates for the groups contained in Table 17 (1898 column) have been calculated, the rates for the preceding five years having been obtained in the same way. In Table 18 the rates for the Parish are contrasted with those for the whole country, the Metropolis, &c., and in Tables 19 and 19A, the deaths and rates from certain selected causes are given for the whole Parish and its two sub-divisions. Certain special tables are included this year, of which more particular mention will be made later.

The total death-rate (15·89) was 0·05 per 1,000 below the mean (15·94) for the five years 1893-97 (see Table 17), and was third in descending order of magnitude for the six years, that for 1893 (17·87) being the highest, and that for 1897 (14·33) the lowest. In comparison with the quinquennial mean rates, the rate for Class I. (Zymotic Diseases) showed an increase last year of 0·34; that for Class III.

TABLE 17.

Death-rates from Groups of Diseases per 1,000 individuals.

|                                                | 1893. | 1894. | 1895. | 1896. | 1897. | Mean.<br>1893 to<br>1897. | 1898. |
|------------------------------------------------|-------|-------|-------|-------|-------|---------------------------|-------|
| I.—SPECIFIC FEBRILE, OR<br>ZYMOTIC DISEASES... | 3.37  | 2.79  | 2.91  | 3.01  | 2.29  | 2.87                      | 3.21  |
| 1. Miasmatic Diseases ...                      | 2.41  | 2.21  | 1.89  | 2.24  | 1.29  | 2.00                      | 2.27  |
| 2. Diarrhoeal " ...                            | 0.53  | 0.37  | 0.74  | 0.52  | 0.87  | 0.60                      | 0.72  |
| 3. Malarial " ...                              | 0.01  | —     | 0.00  | 0.00  | —     | 0.00                      | 0.00  |
| 4. Zoögenous " ...                             | 0.00  | 0.00  | 0.00  | —     | —     | 0.00                      | —     |
| 5. Venereal " ...                              | 0.12  | 0.10  | 0.10  | 0.08  | 0.03  | 0.08                      | 0.07  |
| 6. Septic " ...                                | 0.27  | 0.09  | 0.15  | 0.14  | 0.08  | 0.14                      | 0.14  |
| II.—PARASITIC DISEASES                         | —     | 0.04  | 0.04  | —     | 0.00  | 0.01                      | 0.01  |
| III.—DIETIC DISEASES ...                       | 0.09  | 0.11  | 0.10  | 0.13  | 0.12  | 0.11                      | 0.13  |
| IV.—CONSTITUTIONAL DIS-<br>EASES ... ..        | 3.25  | 3.10  | 2.99  | 2.86  | 2.81  | 3.00                      | 3.06  |
| V.—DEVELOPMENTAL<br>DISEASES ... ..            | 1.05  | 1.09  | 1.35  | 1.31  | 1.14  | 1.19                      | 1.18  |
| VI.—LOCAL DISEASES ...                         | 8.88  | 6.82  | 8.35  | 7.02  | 7.06  | 7.62                      | 7.34  |
| 1. Nervous System ...                          | 1.71  | 1.31  | 1.64  | 1.54  | 1.37  | 1.51                      | 1.29  |
| 2. Organs of Special Sense                     | 0.04  | 0.03  | 0.60  | —     | 0.03  | 0.02                      | 0.03  |
| 3. Circulatory System ...                      | 0.13  | 1.18  | 1.38  | 1.11  | 1.32  | 1.02                      | 1.43  |
| 4. Respiratory System ...                      | 4.10  | 2.60  | 3.65  | 2.47  | 2.51  | 3.06                      | 2.74  |
| 5. Digestive System ...                        | 1.05  | 0.97  | 1.09  | 1.16  | 1.11  | 1.07                      | 1.18  |
| 6. Lymphatic System ...                        | 0.00  | 0.00  | 0.01  | 0.02  | 0.00  | 0.00                      | —     |
| 7. Gland-like Organs of<br>Uncertain Use ...   | 0.01  | 0.02  | 0.02  | 0.01  | —     | 0.01                      | 0.00  |
| 8. Urinary System ...                          | 0.40  | 0.45  | 0.42  | 0.49  | 0.51  | 0.45                      | 0.45  |
| 9. Reproductive System...                      | 0.09  | 0.15  | 0.17  | 0.13  | 0.12  | 0.13                      | 0.10  |
| (a) Organs of Genera-<br>tion ... ..           | 0.03  | 0.05  | 0.10  | 0.03  | 0.03  | 0.05                      | 0.05  |
| (b) Parturition ...                            | 0.05  | 0.09  | 0.06  | 0.10  | 0.08  | 0.07                      | 0.05  |
| 10. Bones and Joints ...                       | 0.06  | 0.04  | 0.04  | 0.03  | 0.03  | 0.04                      | 0.03  |
| 11. Integumentary System                       | 0.02  | 0.02  | 0.02  | 0.02  | 0.02  | 0.02                      | —     |
| VII.—VIOLENCE ... ..                           | 0.57  | 0.64  | 0.62  | 0.46  | 0.45  | 0.55                      | 0.51  |
| 1. Accident or Negligence                      | 0.45  | 0.52  | 0.47  | 0.38  | 0.37  | 0.44                      | 0.40  |
| 2. Homicide ... ..                             | 0.01  | —     | 0.03  | —     | 0.02  | 0.01                      | 0.03  |
| 3. Suicide ... ..                              | 0.09  | 0.12  | 0.12  | 0.07  | 0.05  | 0.09                      | 0.07  |
| 4. Execution ... ..                            | —     | —     | —     | —     | —     | —                         | —     |
| VIII.—ILL-DEFINED & NOT<br>SPECIFIED CAUSES... | 0.63  | 0.45  | 0.48  | 0.52  | 0.42  | 0.50                      | 0.46  |
| Total Death-rates ...                          | 17.87 | 15.06 | 17.09 | 15.34 | 14.33 | 15.94                     | 15.89 |

0.00 Indicates a rate under 0.01 per 1,000. — Indicates no deaths.

(Dietic Diseases) of 0·02; and that for Class IV. (Constitutional Diseases) of 0·06—the other class rates being lower. Of the group-rates, increases are to be noted under Miasmatic (0·27), and Diarrhœal Diseases (0·12), Diseases of the Circulatory (0·41), and Digestive Systems (0·11), and Homicide (0·02).

In comparison with individual years the rates due to Circulatory (1·43) and Digestive Diseases (1·18) were maximal, those due to Nervous Diseases (1·29), Diseases of the Lymphatic (0), and the Integumentary Systems (0) minimal.

A reference to Table 18 will show that the total death-rate there given for the Parish (16·1) was lower than any of the other rates mentioned, whilst the Zymotic Rate (2·41) was lower than all except that for “Rest of England and Wales” (1·75), and “67 Large Towns” (2·41). The local death-rates, as given in that Table, from measles (0·73) and diphtheria (0·48) were maximal, those from scarlet fever (0·06), “fever” (0·13), and diarrhœa (0·65), minimal.

These preliminary observations having been made, it will be sufficient to consider at length only those diseases which either differed markedly from their averages, or presented other special points of interest. No reference will, therefore be made to many of the statistics set out in the Tables mentioned above.

TABLE 18.

|                                         | Birth-rate * | Death-rates* from |                                   |            |          |                |             |                    |          |            |           | Infantile Mortality<br>(0-1 year) per 1,000<br>births registered. |
|-----------------------------------------|--------------|-------------------|-----------------------------------|------------|----------|----------------|-------------|--------------------|----------|------------|-----------|-------------------------------------------------------------------|
|                                         |              | All Causes.       | Principal<br>Zymotic<br>Diseases. | Small-Pox. | Measles. | Scarlet Fever. | Diphtheria. | Whooping<br>Cough. | Fever. † | Diarrhoea. | Phthisis. |                                                                   |
| England & Wales { 1898 .. .. .          | 29.4         | 17.6              | 2.22                              | 0.01       | 0.41     | 0.11           | 0.24        | 0.31               | 0.18     | 0.96       | ?         | 161                                                               |
| 1888-97 .. .. .                         | 30.4         | 18.4              | 2.09                              | 0.01       | 0.42     | 0.18           | 0.23        | 0.40               | 0.16     | 0.62       | 1.47      | 149                                                               |
| 33 Great Towns { 1898 .. .. .           | 30.3         | 19.0              | 2.85                              | 0.00       | 0.56     | 0.14           | 0.31        | 0.42               | 0.20     | 1.22       | ?         | 178                                                               |
| 1888-97 .. .. .                         | ?            | 20.4              | 2.76                              | 0.02       | 0.59     | 0.25           | 0.31        | 0.52               | 0.20     | 0.86       | ?         | 167                                                               |
| 67 Large Towns.. 1898 .. .. .           | 29.4         | 17.2              | 2.41                              | 0.05       | 0.41     | 0.10           | 0.28        | 0.27               | 0.21     | 1.09       | ?         | 173                                                               |
| Rest of England & Wales .. 1898 .. .. . | ?            | 16.7              | 1.75                              | 0.00       | 0.31     | 0.09           | 0.18        | 0.25               | 0.17     | 0.75       | ?         | 146                                                               |
| Registration { 1898 .. .. .             | 29.5         | 18.7              | 2.78                              | 0.00       | 0.68     | 0.13           | 0.39        | 0.48               | 0.13     | 0.97       | 1.76      | 167                                                               |
| London { 1888-97 .. .. .                | 30.9         | 19.7              | 2.70                              | 0.00       | 0.61     | 0.22           | 0.48        | 0.55               | 0.13     | 0.66       | 1.88      | 155                                                               |
| PADDINGTON { 1898 † .. .. .             | 23.2         | 16.1              | 2.41                              | ...        | 0.73     | 0.06           | 0.48        | 0.35               | 0.13     | 0.65       | 1.38      | 161                                                               |
| 1888-97 § .. .. .                       | 24.4         | 16.3              | 2.08                              | 0.00       | 0.37     | 0.12           | 0.46        | 0.40               | 0.11     | 0.57       | 1.31      | 148                                                               |

\* All rates per 1,000 of population. † Includes Typhus, Enteric (or Typhoid), and Simple Continued Fevers. 0.00 indicates a rate of under 0.01 per 1,000. ... indicates no deaths recorded. ‡ From Registrar-General's Annual Summary. § From local registers.

TABLE 19.

Average annual number of Deaths compared with record for 1898.

|                             |                                         | PADDINGTON. |       |       |       | ST. MARY'S. |       |       |       | ST. JOHN'S. |       |       |       |
|-----------------------------|-----------------------------------------|-------------|-------|-------|-------|-------------|-------|-------|-------|-------------|-------|-------|-------|
|                             |                                         | Averages.*  |       |       |       | Averages.*  |       |       |       | Averages.*  |       |       |       |
|                             |                                         | 1888        | 1893  | 1888  |       | 1888        | 1893  | 1888  |       | 1888        | 1893  | 1888  |       |
|                             |                                         | to          | to    | to    |       | to          | to    | to    |       | to          | to    | to    |       |
|                             |                                         | 1898.       | 1892. | 1897. | 1897. | 1898.       | 1892. | 1897. | 1897. | 1898.       | 1892. | 1897. | 1897. |
| Principal Zymotic Diseases. | Smallpox ... ..                         | —           | 0     | 2     | 1     | —           | 0     | 2     | 1     | —           | —     | 0     | 0     |
|                             | Measles ... ..                          | 89          | 54    | 46    | 50    | 84          | 49    | 42    | 46    | 5           | 5     | 4     | 4     |
|                             | Scarlet Fever ... ..                    | 8           | 13    | 20    | 16    | 7           | 11    | 17    | 14    | 1           | 2     | 3     | 2     |
|                             | Whooping Cough ... ..                   | 45          | 62    | 43    | 53    | 41          | 53    | 40    | 47    | 4           | 9     | 3     | 6     |
|                             | Diphtheria† ... ..                      | 64          | 59    | 84    | 72    | 61          | 48    | 73    | 61    | 3           | 11    | 11    | 11    |
|                             | "Fever"† ... ..                         | 17          | 15    | 16    | 15    | 12          | 9     | 12    | 10    | 5           | 6     | 4     | 5     |
|                             | Diarrhoea‡ ... ..                       | 92          | 70    | 78    | 75    | 78          | 63    | 69    | 67    | 14          | 7     | 9     | 8     |
|                             | Totals ... ..                           | 315         | 273   | 289   | 282   | 283         | 233   | 255   | 246   | 32          | 40    | 34    | 36    |
|                             |                                         |             |       |       |       |             |       |       |       |             |       |       |       |
| {                           | Puerperal Fever ... ..                  | 4           | 5     | 5     | 5     | 4           | 4     | 4     | 4     | —           | 1     | 1     | 1     |
|                             | Diseases of Parturition ... ..          | 6           | 8     | 8     | 7     | 5           | 7     | 6     | 6     | 1           | 1     | 2     | 1     |
|                             | Other Septic Diseases ... ..            | 14          | 16    | 14    | 15    | 10          | 12    | 11    | 12    | 4           | 4     | 3     | 3     |
|                             | Epidemic Influenza¶ ... ..              | 67          | 74    | 57    | 63    | 48          | 55    | 42    | 47    | 19          | 19    | 15    | 16    |
|                             | Alcoholism ... ..                       | 15          | 7     | 11    | 9     | 10          | 6     | 8     | 7     | 5           | 1     | 3     | 2     |
|                             | Cirrhosis of Liver ... ..               | 16          | 21    | 19    | 19    | 15          | 13    | 13    | 13    | 1           | 8     | 6     | 6     |
|                             | Malignant Dis. (Cancer) ... ..          | 115         | 106   | 118   | 112   | 82          | 75    | 87    | 82    | 33          | 31    | 31    | 30    |
|                             | Phthisis ... ..                         | 173         | 185   | 155   | 169   | 148         | 159   | 126   | 143   | 25          | 26    | 29    | 26    |
|                             | Other Tubercular Dis-<br>eases   ... .. | 75          | 77    | 74    | 76    | 64          | 63    | 64    | 64    | 11          | 14    | 10    | 12    |
|                             | Apoplexy ... ..                         | 77          | 105   | 92    | 98    | 58          | 80    | 70    | 75    | 19          | 25    | 22    | 23    |
| {                           | Bronchitis ... ..                       | 213         | 271   | 232   | 250   | 181         | 213   | 190   | 202   | 32          | 58    | 42    | 48    |
|                             | Pneumonia ... ..                        | 120         | 190   | 132   | 159   | 100         | 149   | 105   | 126   | 20          | 41    | 27    | 33    |
| {                           | Suicides ... ..                         | 10          | 14    | 12    | 13    | 7           | 10    | 9     | 10    | 3           | 4     | 3     | 3     |

\* Averages corrected for changes in population, and adjusted to nearest whole number in each case.  
0 signifies average less than unity. — no death recorded.

See Footnotes to Table 19A.

### MEASLES.

|                |     |     |       |
|----------------|-----|-----|-------|
| Cases Reported | ... | ... | 1,196 |
| Deaths         | ... | ... | 89    |
| Fatality*      | ... | ... | 7.4   |
| Mortality†     | ... | ... | 0.69  |

In 1897 only 2 deaths were due to this disease, the smallest number on record since 1867, while the total for last year (89) has been exceeded only by that

\* "Fatality"—number of deaths per 100 cases reported.

† "Mortality"—rate per 1,000 inhabitants of all ages, except where otherwise specified.

TABLE 19A.

Rates calculated from figures contained in Table 19.

|                             |                                  | Rates per 1,000 of Populations.           |              |           |               |           |               |
|-----------------------------|----------------------------------|-------------------------------------------|--------------|-----------|---------------|-----------|---------------|
|                             |                                  | PADDINGTON.                               |              | ST. MARY. |               | ST. JOHN. |               |
|                             |                                  | 1898.                                     | Mean 1888-97 | 1898.     | Mean 1888-97. | 1898.     | Mean 1888-97. |
| Principal Zymotic Diseases. | Smallpox ... ..                  | ...                                       | 0.00         | ...       | 0.00          | ...       | 0.00          |
|                             | Measles ... ..                   | 0.69                                      | 0.37         | 0.89      | 0.48          | 0.14      | 0.12          |
|                             | Scarlet Fever ... ..             | 0.06                                      | 0.12         | 0.07      | 0.14          | 0.03      | 0.07          |
|                             | Whooping Cough ... ..            | 0.35                                      | 0.40         | 0.43      | 0.49          | 0.11      | 0.17          |
|                             | Diphtheria† ... ..               | 0.50                                      | 0.55         | 0.63      | 0.65          | 0.09      | 0.32          |
|                             | "Fever"† ... ..                  | 0.13                                      | 0.12         | 0.12      | 0.11          | 0.14      | 0.14          |
|                             | Diarrhoea‡ ... ..                | 0.72                                      | 0.66         | 0.82      | 0.70          | 0.41      | 0.22          |
|                             | Zymotic Rate ... ..              | 2.46                                      | 2.16         | 3.00      | 2.60          | 0.95      | 1.07          |
|                             | { Puerperal Fever ... ..         | 0.03                                      | 0.03         | 0.04      | 0.04          | ...       | 0.02          |
|                             | { Diseases of Parturition ... .. | 0.04                                      | 0.06         | 0.05      | 0.06          | 0.03      | 0.04          |
|                             |                                  | Other Septic Diseases ... ..              | 0.10         | 0.11      | 0.10          | 0.12      | 0.11          |
|                             |                                  | Epidemic Influenza¶ ... ..                | 0.52         | 0.49      | 0.50          | 0.49      | 0.56          |
|                             |                                  | { Alcoholism ... ..                       | 0.11         | 0.07      | 0.10          | 0.07      | 0.14          |
|                             |                                  | { Cirrhosis of Liver ... ..               | 0.12         | 0.15      | 0.15          | 0.13      | 0.03          |
|                             |                                  | { Malignant Dis. (Cancer) ... ..          | 0.90         | 0.88      | 0.87          | 0.86      | 0.98          |
|                             |                                  | { Phthisis ... ..                         | 1.35         | 1.30      | 1.57          | 1.51      | 0.74          |
|                             |                                  | { Other Tubercular Dis-<br>eases   ... .. | 0.58         | 0.58      | 0.67          | 0.68      | 0.32          |
|                             |                                  | Apoplexy ... ..                           | 0.60         | 0.76      | 0.61          | 0.79      | 0.56          |
|                             |                                  | { Bronchitis ... ..                       | 1.66         | 1.94      | 1.92          | 2.14      | 0.95          |
|                             |                                  | { Pneumonia ... ..                        | 0.93         | 1.22      | 1.06          | 1.34      | 0.59          |
|                             |                                  | Suicides ... ..                           | 0.07         | 0.10      | 0.07          | 0.10      | 0.09          |

- † Includes Diphtheria, Quinsy, Croup, Sore Throat, and Laryngitis.  
 †† „ Typhus, Enteric (or Typhoid), and Simple Continued Fevers.  
 ‡ „ Diarrhoea and Dysentery.  
 ¶ „ Epidemic Influenza not separately classified prior to 1890.  
 || „ Tabes Mesenterica, Tubercular Meningitis, Hydrocephalus, Scrofula,  
 and all forms of Tuberculosis, except "Phthisis."

for 1896 (103). Last year's total was 39 above the corrected decennial average, and the rate (0.69) was 0.32 per 1,000 above the mean. In the quinquennium

1888-92, the annual average was 54, three epidemic years being included therein, while in the quinquennium 1893-97 there were three non-epidemic years, and the annual average was 46.

In examining the records for the past thirty years, it has been noted that in the earlier years (up to about 1890) the disease maintained a much more uniformly high level, the differences between epidemic and non-epidemic years being nothing like so marked, and the epidemics not recurring so regularly each alternate year.

If the annual average number of deaths be determined for each of the three decennia between 1868 and 1897, and if those years in which the actual number of deaths exceeded the corresponding decennial average be held to be "epidemic" years, it will be found that there have been twelve such years since 1868, viz., three in the first decennium, four in the second, and five in the third. The averages for the three groups of epidemic years were 70·0, 60·2, and 78·2 respectively, and the average for the 12 "epidemic" years, 70·1. Last year's total (89) represents a considerable increase on these figures, even if the increase in the population be taken into account. It may here be noted that a fatal termination to this disease is exceedingly rare at ages over 15, and hence in the tabulated statement (see p. 55) the numbers of individuals enumerated at ages under 15 years have alone been

quoted. It will be seen that the shrinkage in the mortality during non-epidemic years has been very much greater than the increase in the mortality during "epidemic" years. The figures afford some basis for suspecting that the disease takes a more virulent form during epidemics now than formerly.

DECENNium, 1868-1877.

|                                               |     |           |                     |      |      |           |                 |
|-----------------------------------------------|-----|-----------|---------------------|------|------|-----------|-----------------|
| Population under 15 years of age, Census 1861 | ... | ...       | 20,680              |      |      |           |                 |
| "                                             | "   | "         | 1871                | ...  | ...  | 25,638    |                 |
| Annual average number of deaths from Measles  | ... | ...       | 41.0                |      |      |           |                 |
| Epidemic Years.                               |     |           | Non-Epidemic Years. |      |      |           |                 |
| 1872                                          | ... | 51 deaths | Average<br>70.0     | 1868 | ...  | 39 deaths | Average<br>28.5 |
| 1874                                          | ... | 68 "      |                     | 1869 | ...  | 22 "      |                 |
| 1876                                          | ... | 91 "      |                     | 1870 | ...  | 25 "      |                 |
|                                               |     |           |                     | 1871 | ...  | 31 "      |                 |
|                                               |     |           | 1873                | ...  | 33 " |           |                 |
|                                               |     |           | 1875                | ...  | 11 " |           |                 |
|                                               |     |           | 1877                | ...  | 39 " |           |                 |

DECENNium, 1878-1887.

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| Population under 15 years of age, Census 1871 ...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ... | 25,638 |
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|     |        |

DECENNium 1888-1897.

|                                                      |           |                 |          |                     |                 |
|------------------------------------------------------|-----------|-----------------|----------|---------------------|-----------------|
| Population under 15 years of age, Census 1881 ... .. |           |                 |          | 27,656              |                 |
| " " " " " 1891 ... ..                                |           |                 |          | 30,462              |                 |
| Annual Average number of deaths from Measles ...     |           |                 |          | 45.9                |                 |
| Epidemic Years.                                      |           |                 |          | Non-Epidemic Years. |                 |
| 1888 ...                                             | 66 deaths | Average<br>78.2 | 1889 ... | 11 deaths           | Average<br>13.6 |
| 1890 ...                                             | 77 "      |                 | 1891 ... | 7 "                 |                 |
| 1892 ...                                             | 79 "      |                 | 1893 ... | 30 "                |                 |
| 1894 ...                                             | 66 "      |                 | 1895 ... | 18 "                |                 |
| 1896 ...                                             | 103 "     |                 | 1897 ... | 2 "                 |                 |

In North Paddington, 84 deaths were registered during 1898, 36 more than the corrected decennial average (Table 19A), whilst in South Paddington only 5 deaths were registered, or one in excess of the corrected average. The death-rate in the former district was 0·89 per 1,000 last year, as compared with a mean of 0·48, whilst in the latter, the rate for 1898 was 0·14, and the mean 0·12, thus showing the greater mortality, either by excessive fatality or wider prevalence of the epidemic in the former district. Before leaving this part of the subject, it must be noted that the mortality calculated on the deaths registered as due to measles, does not represent the total loss of life due to the epidemic. Many deaths are returned under other headings, such as bronchitis and other diseases of the lungs, tubercular diseases, &c., without mention of the preceding attack of measles which was the starting point of the ultimately fatal illness. It seems probable, moreover, that some of the increase in the amount of diphtheria noted during the year, was due to the epidemic of measles.

For the first time some information is available as to the number of attacks of this disease, although it is not included in the schedule for notification. This information was collected from the teachers of public elementary schools, from enquiries made on the registration of a death, and (a few only) by voluntary notification on the part of the parents, or

other relations, of the patients. Unfortunately, the information dates from the beginning of March only, whilst the disease was present in the Parish from the commencement of the year. Reliable conclusions cannot be drawn from the statistics compiled, but it will be useful to enquire as to their completeness.

The fatality of measles may be taken to vary from 3·5 to 5·0 per cent. of the attacks. The former fatality has been the experience in Aberdeen, and the latter in Edinburgh, notification of the disease being in force in both Cities. Calculated on these fatalities, the 89 deaths registered during the year would represent either 2,543 or 1,780 attacks, as compared with 1,196 actually reported. Inasmuch as the system of inquiries was not instituted until March, the deaths and known attacks in January and February may be set aside, as well as 8 deaths subsequent to the end of February, which escaped inquiry. The 70 deaths thus remaining would be equivalent to either 2,006 or 1,400 cases, on the fatalities already mentioned, whilst the number of attacks reported during the ten months was 941. It appears probable, therefore, that the cases reported constituted from one-half to two-thirds of the actual number of attacks. Two factors were more particularly operative to render the information incomplete:—(a) the novelty of the system, and (b) the fact that the schools constituted the chief source of the

information. There must have been a large number of attacks in families sending no children to school. Both these defects may be reasonably expected to become less operative with experience, more particularly as the wish to have cases reported becomes more universally known, and the results obtained warrant a further trial.

On information being received of a case of measles, the same routine as to school exclusion, disinfection, &c., was followed as for other infectious disease. With regard to disinfection, measles not being a "dangerous infectious" disease within the meaning of the Public Health (London) Act, 1891, disinfection could not be insisted on after the recovery of the patient, but, by persuasion, a very large proportion of the infected rooms were disinfected, and a smaller proportion of the beds removed for purification. In a considerable proportion of the earlier cases reported, the information was received so long after the onset of the illness that disinfection was not considered necessary. In 95 cases out of upwards of 600 where disinfection was urged, an absolute refusal was met with. As it is exceptional medical advice to be sought, except in the event of serious symptoms supervening, a special system had to be devised to secure prompt disinfection after recovery. The present routine may be described thus :—

On receipt of information of a case, almost invariably from a non-medical source, a visit of inquiry is made to verify the information and ascertain the date of attacks, schools, &c. If the disease be present and admitted by the

parents (they are sufficiently familiar with it to make their evidence reliable), a notice to exclude is sent to all schools attended by children living in the house. At the expiration of ten days from the date of onset of the disease, a visit is made by the disinfecter, and if the patient be recovered and no other child be ill, disinfection is carried out—otherwise it is postponed, and further visits are paid at intervals of not more than seven days, until the patients be well. On the fifteenth day after disinfection, a further visit is paid, and if no infectious sickness be present in the house, it is "cleared," and a certificate of freedom from infection sent to the schools.

In 24 houses further attacks were reported subsequent to disinfection being carried out, but in nine instances only could the subsequent cases be held to mean that disinfection failed to spread infection. In the other 15 instances the secondary attacks were due either to apparently independent fresh source of infection or to some other patient, a member of another family usually, being still ill and the disinfection of the house incomplete. In all the nine instances of failure the subsequent attack was evidently due to the disease being in the incubation stage at the time of disinfection. This is one of the great difficulties to be overcome in connection with measles. Two patients were apparently attacked twice during the course of the epidemic.

The Code drawn up by the School Board for London for use in the Board's Schools directs the teachers to report to the medical officer of health of the district in which the scholar resides every case of measles coming to their knowledge. It was found that this provision was not understood by the teachers, but when pointed out to them, was very generally acted on. It

would be well if a similar provision were included in the Code issued by the Education Department. At present the only inducement which can be offered to teachers of voluntary schools to notify cases, is the recoupment for absence from school of children excluded by the sanitary authority. Except children be so excluded, or the school be closed by order of the authority, the grants are paid on the actual average attendance, which, in an epidemic year such as 1898, would be very materially diminished. If the children be excluded in consequence of the order from the authority, four-fifths of the attendances so missed can be counted in for the purpose of increasing the average of the year.

The information collected during the epidemic is tabulated in Tables 20-22. It should be noted that the school holidays commenced with the last week in July, since which date the parish appears to have been practically free from the disease.

#### SCARLET FEVER.

|               |      |      |      |      |
|---------------|------|------|------|------|
| No. of Cases  | 1898 | 303  | 1897 | 491  |
| No. of Deaths | "    | 8    | "    | 20   |
| Fatality      | "    | 2.6  | "    | 4.0  |
| Mortality     | "    | 0.06 | "    | 0.15 |

Not only were the cases of this disease considerably fewer last year than in 1897, but the fatality of the attacks was much lighter. The 8 deaths were just one-half the corrected decennial average, and compare well with the quinquennial averages, 13 and 20

Table 20.

## MEASLES.

Distribution of known Attacks and Deaths in months.

| 1898.               | Attacks. |        | Deaths. |        | Parish.  |         |
|---------------------|----------|--------|---------|--------|----------|---------|
|                     | North.   | South. | North.  | South. | Attacks. | Deaths. |
| January .. ..       | 11       | ..     | 6       | ..     | 11       | 6       |
| February .. ..      | 244      | ..     | 5       | ..     | 244      | 5       |
| March .. ..         | 343      | 24     | 19      | 1      | 367      | 20      |
| April .. ..         | 202      | 29     | 26      | 1      | 231      | 27      |
| May .. ..           | 148      | 30     | 13      | 2      | 178      | 15      |
| June .. ..          | 109      | 13     | 9       | ..     | 122      | 9       |
| July .. ..          | 19       | 1      | 2       | 1      | 20       | 3       |
| August .. ..        | ..       | ..     | 3       | ..     | ..       | 3       |
| September .. ..     | ..       | ..     | 1       | ..     | ..       | 1       |
| October .. ..       | 4        | ..     | ..      | ..     | 4        | ..      |
| November .. ..      | 3        | ..     | ..      | ..     | 3        | ..      |
| December .. ..      | ..       | ..     | ..      | ..     | ..       | ..      |
| Totals ..           | 1,083    | 97     | 84      | 5      | 1,180    | 89      |
| No date recorded .. | 14       | 2      | ..      | ..     | 16       | ..      |
| Grand Totals ..     | 1,097    | 99     | 84      | 5      | 1,196    | 89      |

Table 21.

Number of Attacks reported per house.

| 1898.                 | North. | South. | Parish. |
|-----------------------|--------|--------|---------|
| Cases per House       |        |        |         |
| 1                     | 313    | 39     | 352     |
| 2                     | 148    | 12     | 160     |
| 3                     | 64     | 5      | 69      |
| 4                     | 26     | 3      | 29      |
| 5                     | 22     | ..     | 22      |
| 6                     | 5      | ..     | 5       |
| 7                     | 4      | ..     | 4       |
| 8                     | 3      | ..     | 3       |
| 9                     | ..     | 1      | 1       |
| Total Houses infected | 585    | 60     | 645     |

Table 22.  
Age incidence of known Cases and Deaths.

| 1898.                  | ATTACKS. |     |        |    |                  | DEATHS. |    |        |    |                  |
|------------------------|----------|-----|--------|----|------------------|---------|----|--------|----|------------------|
|                        | North.   |     | South. |    | Pad-<br>dington. | North.  |    | South. |    | Pad-<br>dington. |
|                        | M.       | F.  | M.     | F. | Persons.         | M.      | F. | M.     | F. | Persons.         |
|                        |          |     |        |    |                  |         |    |        |    |                  |
| Months.                |          |     |        |    |                  |         |    |        |    |                  |
| 0—                     | 2        | 1   | —      | —  | 3                | —       | —  | —      | —  | —                |
| 3—                     | 1        | 2   | —      | —  | 3                | 1       | 1  | —      | —  | 2                |
| 6—                     | 16       | 15  | —      | 1  | 32               | 3       | 2  | —      | —  | 5                |
| 9—                     | 16       | 13  | 2      | —  | 31               | 6       | 4  | 1      | —  | 11               |
| Under 1 year           | 35       | 31  | 2      | 1  | 69               | 10      | 7  | 1      | —  | 18               |
| Years.                 |          |     |        |    |                  |         |    |        |    |                  |
| 1—                     | 58       | 69  | 8      | 6  | 141              | 14      | 16 | —      | 1  | 31               |
| 2—                     | 54       | 49  | 4      | 3  | 110              | 10      | 8  | —      | 2  | 20               |
| 3—                     | 77       | 74  | 7      | 5  | 163              | 5       | 5  | 1      | —  | 11               |
| 4—                     | 110      | 87  | 5      | 5  | 207              | 5       | 1  | —      | —  | 6                |
| 1—5 years              | 299      | 279 | 24     | 19 | 621              | 34      | 30 | 1      | 3  | 68               |
| Years.                 |          |     |        |    |                  |         |    |        |    |                  |
| 5—                     | 74       | 90  | 7      | 11 | 182              | 1       | —  | —      | —  | 1                |
| 6—                     | 76       | 71  | 8      | 8  | 163              | —       | 1  | —      | —  | 1                |
| 7—                     | 26       | 36  | 4      | 2  | 68               | 1       | —  | —      | —  | 1                |
| 8—                     | 17       | 10  | 2      | 1  | 30               | —       | —  | —      | —  | —                |
| 9—                     | 7        | 8   | 1      | 2  | 18               | —       | —  | —      | —  | —                |
| 5—10 years             | 200      | 215 | 22     | 24 | 461              | 2       | 1  | —      | —  | 3                |
| Years.                 |          |     |        |    |                  |         |    |        |    |                  |
| 10—                    | 15       | 10  | 2      | 1  | 28               | —       | —  | —      | —  | —                |
| 15—                    | 4        | 4   | 1      | 2  | 11               | —       | —  | —      | —  | —                |
| Totals                 | 553      | 539 | 51     | 47 | 1,190            | 46      | 38 | 2      | 3  | 89               |
| Age not<br>recorded. } | 4        | 1   | —      | 1  | 6                | —       | —  | —      | —  | —                |
| Grand Totals           | 557      | 540 | 51     | 48 | 1,196            | 46      | 38 | 2      | 3  | 89               |

(Table 19). The mortality (0·06) was half the decennial mean rate. In North Paddington the fatality was equal to 2·7 per cent. of the cases notified, and in

South to 2·0 per cent. The mortality was 0·07 per 1,000 in the Northern Division, as compared with a decennial average of 0·14, and 0·03 in the Southern, the mean being 0·07. Of the 8 deaths, 6 took place in hospital, equal to 2·5 per cent. of cases removed, and 2 at home, equal to 3·5 per cent. of cases not removed.

#### WHOOPING COUGH.

|               |   |            |      |      |      |
|---------------|---|------------|------|------|------|
| No. of Cases  | } | Not known. |      |      |      |
| Fatality      |   |            |      |      |      |
| No. of Deaths |   | 1898       | 45   | 1897 | 40   |
| Mortality     |   | "          | 0·35 | "    | 0·31 |

The deaths from this disease during the year were 8 below the decennial average, 7 below that for the quinquennium 1888-92, and two *above* that for the quinquennium 1893-97. The mortality, 0·35 per 1,000, was 0·05 below the mean rate. In North Paddington 41 deaths were attributed to this cause, as compared with corrected averages of 53 and 40 for the two five-year periods of 1888-92 and 1893-97, and of 47 for the decennium. The mortality was 0·43 per 1,000, as compared with a mean rate of 0·49. In South Paddington there were 4 deaths, as compared with averages of 9 and 3 for the first and second of the two quinquennia, and of 6 for the decennium. The mortality in 1898 was 0·11 per 1,000 as compared with 0·17.

Nothing is known of the frequency with which a fatal termination is observed in this disease. There

is, however, good reason to believe that neglect and ignorance are the most effective factors in causing the comparatively high mortality.

#### DIPHTHERIA.

|               |      |      |      |      |
|---------------|------|------|------|------|
| No. of Cases  | 1898 | 258  | 1897 | 322  |
| No. of Deaths | "    | 64   | "    | 65   |
| Fatality      | "    | 24·8 | "    | 20·1 |
| Mortality     | "    | 0·50 | "    | 0·51 |

The deaths from this disease were one fewer than in 1897, 3 fewer than in 1896, and 8 below the corrected decennial average. In comparison with the quinquennial averages, last year's total was 5 above that average for 1888-92, and 20 below that for 1893-97. The fatality last year (24·8) was higher than that of 1897 (29·1), but below that for 1896 (27·6). Higher totals were recorded in 1888 (75), 1892 (92), 1893 (69), and 1896 (67). It is worthy of note that, with the exception of 1893, epidemics of measles took place in the years mentioned, and further that during the past year there were several fatal cases almost immediately after the height of the measles epidemic, many of the deceased having just previously had attacks of the latter disease. Last year's mortality was 0·05 per 1,000 below the mean rate.

According to the rates given in Table 18, the mortality during 1898 from this disease (0·48) in Paddington, was double that of "England and Wales" (0·24), and higher than any of the other rates. In

the Annual Summary for 1898, published by the Registrar-General, there is a table giving the annual mortality from diphtheria in each of the Metropolitan Sanitary Areas for each of the past ten years. The following figures have been extracted therefrom :—

Death-rates from Diphtheria per 1,000 living, after  
distribution of deaths in Public Institutions.

| AREAS.               | YEARS.      |      |             |             |             |             |      |             |             |      |
|----------------------|-------------|------|-------------|-------------|-------------|-------------|------|-------------|-------------|------|
|                      | 1889        | 1890 | 1891        | 1892        | 1893        | 1894        | 1895 | 1896        | 1897        | 1898 |
| <b>Registration</b>  |             |      |             |             |             |             |      |             |             |      |
| London ...           | 0·38        | 0·33 | 0·32        | 0·44        | <b>0·75</b> | 0·61        | 0·52 | 0·59        | 0·50        | 0·39 |
| <b>West.</b>         |             |      |             |             |             |             |      |             |             |      |
| Paddington...        | 0·36        | 0·34 | 0·20        | 0·23        | 0·58        | <b>0·76</b> | 0·38 | 0·51        | 0·51        | 0·48 |
| Kensington...        | <b>0·67</b> | 0·20 | 0·17        | 0·20        | 0·49        | 0·46        | 0·53 | 0·40        | 0·47        | 0·15 |
| Hammersmith          | 0·49        | 0·51 | <b>0·75</b> | 0·74        | 0·53        | 0·49        | 0·43 | 0·49        | 0·28        | 0·21 |
| Fulham ...           | 0·15        | 0·25 | 0·21        | 0·32        | 0·63        | <b>0·99</b> | 0·70 | 0·66        | 0·53        | 0·49 |
| Chelsea ...          | 0·25        | 0·58 | 0·17        | 0·41        | 0·54        | 0·54        | 0·59 | <b>1·17</b> | 0·56        | 0·43 |
| St. George,          |             |      |             |             |             |             |      |             |             |      |
| Hanover Sq.          | 0·37        | 0·16 | 0·26        | 0·33        | <b>0·43</b> | 0·24        | 0·30 | 0·30        | 0·21        | 0·12 |
| Westminster          | 0·50        | 0·16 | 0·20        | <b>0·80</b> | 0·26        | 0·48        | 0·39 | 0·37        | 0·43        | 0·42 |
| St. James',          |             |      |             |             |             |             |      |             |             |      |
| Westminster          | 0·08        | 0·12 | 0·28        | 0·25        | 0·58        | <b>0·63</b> | 0·17 | 0·09        | 0·13        | 0·23 |
| <b>North.</b>        |             |      |             |             |             |             |      |             |             |      |
| St. Marylebone       | 0·23        | 0·19 | 0·18        | 0·34        | <b>0·66</b> | 0·51        | 0·25 | 0·52        | 0·33        | 0·32 |
| Hampstead ...        | 0·13        | 0·31 | 0·19        | 0·39        | <b>0·53</b> | 0·27        | 0·19 | 0·39        | 0·22        | 0·24 |
| <b>Extra</b>         |             |      |             |             |             |             |      |             |             |      |
| <b>Metropolitan.</b> |             |      |             |             |             |             |      |             |             |      |
| Willesden*           | 0·12        | 0·30 | 0·11        | 0·27        | 0·63        | 0·21        | 0·42 | 0·32        | <b>0·68</b> | 0·65 |

\* From the Annual Report of the Medical Officer of Health of the District.

The maximum rate for last year was that of Willesden (0·65), that of Fulham (0·49) being next, and that of Paddington (0·48) third. The rate of St. George, Hanover Square (0·12) was the lowest, with that of Kensington (0·15) next. The year of

maximum prevalence in each district (indicated by block type) appears to be a result of local rather than general influences.

In North Paddington there were 61 deaths, as compared with averages of 48, 73, and 61 for the two quinquennia and the decennium respectively. The mortality was 0·63 per 1,000, compared with a mean rate of 0·65. In South Paddington 3 deaths occurred during the year, 8 less than each of the averages for the quinquennia and decennium. The mortality was 0·09 per 1,000, compared with a mean of 0·32, a very marked improvement.

An examination of the sex-age mortality (Table 23) shows that the increase was almost entirely confined to males, the rates for females at ages "1-5" and "5-15" being below the mean rates for the previous quinquennium, while that for ages "under one" was only 0·11 per 1,000 above the mean. On the other hand, the rates for males at all three ages were above the mean rates. The greatest increase took place in the rate for males aged "1-5" in North Paddington, that for last year being 6·43, as compared with a mean of 4·70. The incidence of the epidemic of measles was greatest at these ages (see Table 22, p. 62). The reductions in the rates in South Paddington are all satisfactory, notably that for males at "1-5," last year's rate being zero, as compared with a mean of 4·43.

TABLE 23.

## Sex-Age-Mortality from Diphtheria.

| Age.           |                   |       | Paddington. |      | St. Mary. |      | St. John. |      |
|----------------|-------------------|-------|-------------|------|-----------|------|-----------|------|
|                |                   |       | M.          | F.   | M.        | F.   | M.        | F.   |
| 0-1<br>years.  | 1898              | .. .. | 2.27        | 1.45 | 2.64      | 1.70 | —         | —    |
|                | Mean-rate, 1893-7 |       | 2.05        | 1.34 | 2.40      | 1.58 | —         | —    |
|                | 1897              | .. .. | 0.76        | 2.95 | 0.89      | 3.46 | —         | —    |
|                | 1896              | .. .. | 2.30        | 2.21 | 2.70      | 2.60 | —         | —    |
|                | 1895              | .. .. | 1.57        | —    | 1.83      | —    | —         | —    |
|                | 1894              | .. .. | 2.39        | —    | 2.80      | —    | —         | —    |
|                | 1893              | .. .. | 3.22        | 1.55 | 3.79      | 1.84 | —         | —    |
|                |                   |       |             |      |           |      |           |      |
| 1-5<br>years.  | 1898              | .. .. | 5.36        | 2.92 | 6.43      | 3.29 | —         | 1.23 |
|                | Mean rate, 1893-7 |       | 4.66        | 4.21 | 4.70      | 4.78 | 4.43      | 1.49 |
|                | 1897              | .. .. | 4.78        | 2.33 | 4.70      | 2.81 | 5.16      | —    |
|                | 1896              | .. .. | 5.64        | 4.44 | 5.75      | 4.86 | 5.09      | 2.43 |
|                | 1895              | .. .. | 3.57        | 3.04 | 3.74      | 3.66 | 2.68      | —    |
|                | 1894              | .. .. | 4.97        | 7.05 | 5.72      | 8.26 | 1.32      | 1.27 |
|                | 1893              | .. .. | 4.34        | 4.23 | 3.59      | 4.32 | 7.91      | 3.78 |
|                |                   |       |             |      |           |      |           |      |
| 5-15<br>years. | 1898              | .. .. | 0.88        | 0.63 | 0.95      | 0.79 | 0.53      | —    |
|                | Mean rate, 1893-7 |       | 0.72        | 1.24 | 0.76      | 1.23 | 0.54      | 1.22 |
|                | 1897              | .. .. | 1.18        | 1.19 | 1.33      | 1.15 | 0.53      | 1.39 |
|                | 1896              | .. .. | 0.29        | 0.64 | 0.24      | 0.57 | 0.52      | 0.91 |
|                | 1895              | .. .. | 0.60        | 0.94 | 0.74      | 0.94 | —         | 0.96 |
|                | 1894              | .. .. | 0.72        | 2.30 | 0.63      | 2.30 | 1.10      | 1.90 |
|                | 1893              | .. .. | 0.83        | 1.16 | 0.89      | 1.21 | 0.54      | 0.94 |
|                |                   |       |             |      |           |      |           |      |

Deaths at ages over 15 years, not included in above:—

|           |   |           |   |
|-----------|---|-----------|---|
| 1893..... | 5 | 1896..... | 4 |
| 1894..... | 3 | 1897..... | 2 |
| 1895..... | 1 | 1898..... | 4 |

Among the 166 patients removed to hospital, 35 deaths occurred, equal to a fatality of 21·0 per cent., and among the 92 treated at home, 29, equal to a fatality of 31·5 per cent. In 1897 the fatality in the former group was 17·9 and in the latter 24·1. It should be noted that among the patients kept at home there were many cases which terminated fatally on the day of notification, and some fatal a day or more earlier.

#### FEVER.\*

|               |      |      |      |      |
|---------------|------|------|------|------|
| No. of Cases  | 1898 | 76   | 1897 | 45   |
| No. of Deaths | "    | 17   | "    | 7    |
| Fatality      | "    | 22·6 | "    | 15·5 |
| Mortality     | "    | 0·13 | "    | 0·05 |

The deaths recorded in 1898 from this disease were 2 above the decennial average, and that for the five years 1888-92, and one above that for 1893-97. The mortality (0·13) was 0·01 above the decennial mean. In North Paddington 12 deaths were recorded, as compared with averages of 9 and 12 in the two quinquennia 1888-92 and 1893-97 respectively, and of 10 in the decennium. The mortality was 0·12, as compared with a mean rate of 0·11. In South Paddington 5 deaths were recorded, equal to the average for the ten years, one less than the average for 1888-92, and one above that for 1893-97. The mortality (0·14) was equal to the mean rate.

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\* "Fever"—includes Typhus Fever (no death for many years), Enteric Fever (17 deaths), and Simple Continued Fever (no death in 1898).

The fatality of the disease (22·6) was higher last year than in 1897 (15·5), but not equal to that which prevailed in 1896 (25·7).

#### DIARRHŒA.

|               |   |            |      |      |      |
|---------------|---|------------|------|------|------|
| No of Cases   | } | Not known. |      |      |      |
| Fatality      |   |            |      |      |      |
| No. of Deaths |   | 1898       | 92   | 1897 | 107  |
| Mortality     |   | "          | 0·72 | "    | 0·84 |

The deaths from this cause were 17 above the ten-year average, 22 above that for 1888-92, and 14 above that for 1893-97. The mortality, calculated per 1,000 persons of all ages, was 0·72, as compared with a mean rate of 0·56. In North Paddington, the deaths numbered 78, as compared with an average of 67 for the ten years, one of 63 for the first quinquennium, and one of 69 in the second. The mortality was 0·82 (calculated as before), as compared with a mean rate of 0·70. In South Paddington the deaths amounted to 14, while the averages were, for the first and second quinquennia, 7 and 9 respectively, and for the decennium, 8. The mortality (0·41) was nearly double the mean rate (0·22).

This subject will be further considered under the heading of "Infantile Mortality," to which it properly belongs.

The foregoing diseases, with the addition of small-pox, from which no death has been recorded during the past two years, constitute the "Seven Principal Zymotics," on which is based the Zymotic Death-rate.

The deaths from these causes amounted to 315 in all, and were equivalent to a rate of 2·46 per 1,000 persons of all ages, as compared with a decennial mean of 2·16. In North Paddington the rate for the year was 3·00, and the mean rate 2·60, while in South the former was 0·95, and the latter 1·07.

These Zymotic Diseases naturally fall into two classes, (*a*) those which are notified, and for the prevention of which isolation, &c., are enforced, and (*b*) those of which nothing is heard until the fatal issue is recorded. In the former are included small-pox, scarlet fever, diphtheria, and "fever," and in the latter measles, whooping cough, and diarrhœa. The deaths from the former group of diseases amounted to 89, equal to a rate of 0·69 per 1,000 persons, and those of the latter group to 229, equal to a rate of 1·77. The death-rate from group (*a*) was 0·73 in 1897, and 0·84 in 1896, while that from group (*b*) was 1·18 and 1·71 respectively. Last year the rates from group (*a*) in North and South Paddington were 0·82 and 0·26 respectively, and those from group (*b*) 2·18 and 0·69.

#### PUERPERAL FEVER.

|               |      |      |      |      |
|---------------|------|------|------|------|
| No. of Cases  | 1898 | 5    | 1897 | 7    |
| No. of Deaths | "    | 4    | "    | 2    |
| Fatality      | "    | 80·0 | "    | 28·5 |
| Mortality*    | "    | 0·05 | "    | 0·02 |

\* Per 1,000 females living at all ages.

The deaths from this disease were one below the average, and the mortality (calculated per 1,000 persons living of both sexes) 0·03, equal to the mean.

In North Paddington the deaths were equal to the averages, and the mortality (0·04) was also equal to the mean. In South Paddington no death was registered from this cause, the average being in each case one, and the mean mortality 0·02.

The deaths of adult females from "diseases of parturition" should be added to those from puerperal fever, to obtain an idea as to the frequency of a fatal issue in confinements. From the former diseases 6 deaths were registered, as compared with averages of 8, 8, and 7. The mortality was 0·04, or 0·02 below the mean. During the ten years 1888-97, 29,395 births were registered in the Parish, 24,637 in North Paddington, and 4,758 in South. In the same period 188 deaths were due to puerperal fever and diseases of parturition, 143 in North and 45 in South Paddington. The corresponding fatality-rates (per 1,000 births registered) for the ten years were 6·3, 5·8, and 9·4 respectively. In 1898 2,965 births were registered, 2,558 in North and 407 in South Paddington; the deaths from these causes were 10, 9, and 1, and the fatality-rates 3·3, 3·5, and 2·4 respectively.

The fatality from puerperal fever, as given above, (80·0) is excessively high, but there is little doubt that it is erroneous. It is very difficult to secure the full notification of this disease, opinion being much divided as to what is, and what is not, included in the term

“puerperal fever.” The following opinions were obtained on the subject during the past year :—

The Royal College of Physicians expressed the opinion that: “With a view to the limitation of dangerous infectious diseases, the London County Council would be acting rightly in adopting the view that the expression ‘puerperal fever,’ as contained in Section 55 of the Public Health (London) Act, 1891, should be taken to include septicæmia, pyæmia, septic peritonitis, septic metritis, and other acute septic inflammations in the pelvis occurring as the direct result of child-birth”; and the Council of the Obstetrical Society that “most of the diseases mentioned\* . . . are intended to be included under the name of puerperal fever in the Public Health Act.” And further that “an inclusive definition should be added after the words ‘puerperal fever’ in the following form :—

“‘That is, septicæmia and pyæmia, including peritonitis, and all cases of acute pelvic inflammation occurring in connection with child-birth.’”

### “CANCER.”

The deaths from the numerous forms of disease included under this term amounted to 115 during the year, as compared with a decennial average of 112. During 1888-92 the annual average was 106, and that during 1893-97, 118. In North Paddington 82 deaths were attributed to this group of causes, the averages for the decennium being 82, and for the two quinquennia 75 (first) and 87 (second). In South Paddington there were 33 deaths, 3 more than the ten-year average, and 2 more than both the five-year. The death-rate was equal to 0·90 per 1,000 persons

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\* Viz, peritonitis and metritis, occurring in connection with parturition, puerperal pyæmia, p. septicæmia, and p. sapræmia.

of all ages in Paddington, 0·87 in the Northern Division, and 0·98 in the Southern. The decennial mean rates were 0·88, 0·86, and 0·91 respectively.

It has already been said that the term "cancer" includes more than one form of disease, but how far such differentiation means distinct diseases, or different manifestations arising from one essential cause, it is impossible to say. The 115 deaths classed under "cancer" during the past year included 35 certified as "cancer," 52 as "carcinoma," 2 as "scirrhus" ("stone") cancer, 7 as "sarcoma," 5 as "epithelioma," one as "rodent ulcer," and 13 as "malignant disease." The one feature common to all these forms is "malignancy," *i.e.*, a tendency to recur after surgical interference, and to infect parts of the body at a greater or less distance from the seat of its first appearance. The fatal issue may be due to many causes, which it is needless to discuss here. The parts affected are indicated in the analysis of the deaths in 1898 on page 74. The numbers are too small to serve as a basis of any discussion.

"Cancer" is supposed to haunt certain districts and houses, and with a view to the examination of this question, the deaths recorded during the year have been allotted to the streets, &c., in which the homes of the deceased were situated. The results obtained from one year's figures cannot be taken as conclusive, but it may be mentioned that there were

## Parts of the body affected with "Cancer."

| 1998.                                         | NORTH. |     |         |     | SOUTH. |     |         |     |
|-----------------------------------------------|--------|-----|---------|-----|--------|-----|---------|-----|
|                                               | Male.  |     | Female. |     | Male.  |     | Female. |     |
|                                               | C.     | O.  | C.      | O.  | C.     | O.  | C.      | O.  |
| 1. Nervous System ... ..                      | ...    | ... | ...     | ... | ...    | ... | ...     | ... |
| 2. Organs of Special Sense ... ..             | ...    | ... | ...     | ... | ...    | ... | ...     | ... |
| 3. Circulatory and Respiratory Systems ... .. | ...    | ... | ...     | ... | ...    | ... | ...     | ... |
| Lungs ... ..                                  | 1      | ... | ...     | ... | ...    | ... | ...     | ... |
| 4. Digestive System —                         |        |     |         |     |        |     |         |     |
| Tongue ... ..                                 | 2      | 1   | ...     | ... | ...    | ... | ...     | ... |
| Pharynx ... ..                                | ...    | ... | ...     | ... | 1      | ... | ...     | ... |
| Esophagus ... ..                              | 4      | ... | 1       | ... | ...    | ... | 1       | ... |
| Stomach ... ..                                | 2      | ... | 3       | ... | 1      | ... | 1       | ... |
| Intestine ... ..                              | 3      | ... | 4       | ... | 1      | ... | 2       | ... |
| Rectum ... ..                                 | 1      | ... | 3       | ... | ...    | ... | 4       | 1   |
| Liver ... ..                                  | 4      | 1   | 6       | 1   | ...    | ... | 1       | ... |
| Elsewhere ... ..                              | ...    | ... | 1       | ... | ...    | ... | ...     | ... |
| 5. Lymphatics and other Glands                | 1      | ... | 1       | 1   | ...    | ... | ...     | ... |
| 6. Urinary System—                            |        |     |         |     |        |     |         |     |
| Kidney ... ..                                 | ...    | ... | 1       | 1   | 1      | ... | 1       | ... |
| Bladder ... ..                                | 1      | 1   | 1       | ... | ...    | ... | 2       | ... |
| Generative System—                            |        |     |         |     |        |     |         |     |
| External Organs ... ..                        | ...    | ... | 1       | 1   | ...    | ... | ...     | ... |
| Ovary ... ..                                  | ...    | ... | 1       | ... | ...    | ... | 1       | ... |
| Uterus ... ..                                 | ...    | ... | 13      | 1   | ...    | ... | 6       | ... |
| Breast ... ..                                 | ...    | ... | 6       | 1   | ...    | ... | 5       | 1   |
| 8. Osseous System—                            |        |     |         |     |        |     |         |     |
| Upper Extremity ... ..                        | ...    | ... | 1       | 1   | ...    | ... | ...     | ... |
| Lower Extremity ... ..                        | ...    | ... | ...     | 1   | ...    | ... | ...     | ... |
| Head ... ..                                   | 1      | ... | 1       | ... | ...    | ... | ...     | ... |
| 9. Integumentary System ... ..                | ...    | ... | ...     | ... | ...    | ... | ...     | ... |
| 10. Incompletely located ... ..               | 1      | ... | ...     | ... | ...    | ... | 2       | ... |
| 11. No location specified ... ..              | 1      | 1   | 4       | ... | ...    | ... | 1       | ... |
| Totals ... ..                                 | 22     | 4   | 48      | 8   | 4      | ... | 27      | 2   |

"C." includes cancer, carcinoma, and malignant disease.

"O." includes scirrhus, epithelioma, and sarcoma.

no appearances of any special areas in the analysis of last year's deaths. The allocation will be continued in the future, and extended into earlier years as opportunity occurs.

The question as to the increased prevalence of "cancer" is almost as eagerly discussed just now, as is that of the suppression of tuberculosis. With a view to examining the former question, the deaths recorded in the parish since 1868, the first year of which any tabulated records have been preserved, have been taken out, and the averages for the three decennia which have since elapsed, have been struck. "Cancer" is not a disease affecting the young, as is shown by the fact that of 2,016 deaths recorded between 1875 and 1897 (inclusive) only 25 occurred in persons under 25 years of age. For this reason, in the tabulated statement here set out, the populations at ages above 25 at each census has been given to enable some idea to be formed of the actual increase in the frequency in the records.

#### Ten years, 1868-77.

|                        |     | Population aged 25 years and upwards. |     |        |
|------------------------|-----|---------------------------------------|-----|--------|
| Total number of deaths | 527 | Census 1861                           | ... | 39,093 |
| Annual average         | ... | „ 1871                                | ... | 50,068 |

#### Ten years, 1878-87.

|                        |     | Population aged 25 years and upwards. |     |        |
|------------------------|-----|---------------------------------------|-----|--------|
| Total number of deaths | 758 | Census 1871                           | ... | 50,068 |
| Annual average         | ... | „ 1881                                | ... | 55,573 |

#### Ten years, 1888-97.

|                        |       | Population aged 25 years and upwards. |     |        |
|------------------------|-------|---------------------------------------|-----|--------|
| Total number of deaths | 1,067 | Census 1881                           | ... | 55,573 |
| Annual average         | ...   | „ 1891                                | ... | 62,060 |

|                                                                                       |     |                                      |     |     |                 |
|---------------------------------------------------------------------------------------|-----|--------------------------------------|-----|-----|-----------------|
| Increase in average annual number of deaths in third as compared with first period... |     |                                      |     |     | 102.4 per cent. |
| Do.                                                                                   | do. | population aged 25 years and upwards |     |     |                 |
| ...                                                                                   | ... | ...                                  | ... | ... | 58.7 „          |

Comparing the first period with the last, there has been an increase in the annual number of deaths attributed to "cancer" amounting to 102·4 per cent., whilst the increase in the population at ages above 25 as enumerated in 1891, compared with the census of 1861, amounted to 58·7 per cent. There can be no hesitation, therefore, in saying that there has been a considerable increase in the number of deaths registered as due to "cancer," but this does not necessarily imply that there has been an increase in the actual prevalence of the disease. There are good reasons for holding that much of the increase is due to greater accuracy both in diagnosis, and death certification. Antiseptic, or rather a-septic, surgery enables exploratory operations to be undertaken more frequently, so that cases which aforesaid would have been registered as "tumour," "dropsy," and the like, are now diagnosed as one or other of the forms of cancer. The extent to which such improvements in diagnosis and certification are responsible for the apparent increase in "cancer" can only be determined by a careful comparison of the recorded deaths for a long period of years. This work is in hand, and the results will be dealt with on a future occasion. It may be here added that there is another possible factor in the apparent increase. The reduced mortality among children and young adults involves the carrying over of number of lives which have

ultimately to be removed by diseases of late adult life and old age, among which "cancer" takes a prominent place.

Prior to 1892 the records do not distinguish the sexes, and the figures for the seven years subsequent thereto are as follow :—

|      |     | St. Mary. |    | St. John. |    |
|------|-----|-----------|----|-----------|----|
|      |     | M.        | F. | M.        | F. |
| 1892 | ... | 18        | 47 | 13        | 24 |
| 1893 | ... | 17        | 68 | 16        | 21 |
| 1894 | ... | 25        | 64 | 7         | 24 |
| 1895 | ... | 28        | 45 | 8         | 22 |
| 1896 | ... | 30        | 56 | 8         | 21 |
| 1897 | ... | 21        | 63 | 12        | 18 |
| 1898 | ... | 26        | 56 | 5         | 28 |

## DEATHS OF INFANTS UNDER ONE YEAR OF AGE.

In Table 24, the deaths of these children have been classified under the principal causes, and set out in comparison with the annual averages for the preceding decennium and the two quinquennia included therein. The "corrected averages" have been obtained by the use of the factor  $\frac{2965}{2940}$  (1.008 based on the annual average number of births registered in the decennium (2,940) and in 1898 (2,965).

TABLE 24.

## Deaths of Infants under One Year.

(Averages adjusted to nearest whole numbers in each case.)

|                                               | Uncorrected Averages. |          |          | Corrected<br>Averages,<br>1888-97.* | 1898. |
|-----------------------------------------------|-----------------------|----------|----------|-------------------------------------|-------|
|                                               | 1888-92.              | 1893-97. | 1888-97. |                                     |       |
| Smallpox ... ..                               | ...                   | ...      | ...      | ...                                 | ...   |
| Measles ... ..                                | 10                    | 10       | 10       | 10                                  | 18    |
| Scarlet Fever ... ..                          | 0                     | 1        | 0        | 0                                   | ...   |
| Whooping Cough ... ..                         | 20                    | 19       | 19       | 19                                  | 20    |
| Diphtheria ... ..                             | 3                     | 4        | 4        | 4                                   | 5     |
| "Fever" ... ..                                | ...                   | ...      | ...      | ...                                 | ...   |
| Diarrhœa ... ..                               | 51                    | 60       | 56       | 57                                  | 81    |
| Principal Zymotics ...                        | 84                    | 94       | 89       | 90                                  | 124   |
| Syphilis ... ..                               | 10                    | 7        | 8        | 8                                   | 7     |
| All other Zymotics ...                        | 2                     | 5        | 4        | 4                                   | 8     |
| Total Zymotics ...                            | 96                    | 106      | 101      | 102                                 | 139   |
| Want of Breast Milk ...                       | 2                     | 4        | 3        | 3                                   | 1     |
| Tubercular Diseases ...                       | 29                    | 26       | 28       | 28                                  | 37    |
| Premature Birth ... ..                        | 50                    | 61       | 55       | 55                                  | 60    |
| Malformations ... ..                          | 12                    | 20       | 16       | 16                                  | 19    |
| Convulsions ... ..                            | 35                    | 30       | 32       | 32                                  | 18    |
| Bronchitis and Pneumonia                      | 68                    | 78       | 73       | 74                                  | 70    |
| Dentition ... ..                              | 9                     | 6        | 8        | 8                                   | 4     |
| Enteritis ... ..                              | 5                     | 22       | 14       | 14                                  | 38    |
| Suffocation ... ..                            | 11                    | 12       | 12       | 12                                  | 9     |
| Other Forms of Violence ...                   | 5                     | 3        | 4        | 4                                   | 8     |
| Atrophy and Debility ...                      | 63                    | 50       | 56       | 57                                  | 53    |
| All other Causes ... ..                       | 32                    | 32       | 32       | 32                                  | 23    |
| Grand Totals ... ..                           | 417                   | 450      | 434      | 437                                 | 476   |
| Infantile Mortality per<br>1,000 births } ... | 143                   | 151      | 149      | 147                                 | 160   |

\* Factor  $\frac{2965}{2940} = 1.008$

The deaths recorded (476) were 39 in excess of the corrected (437) and 42 in excess of the uncorrected (434) decennial averages. The deaths from the principal zymotic diseases (124) were 34 in excess of the corrected average, the bulk of this increase being due to the epidemics of measles (18 deaths as compared with an average of 10) and diarrhœa (81 deaths as compared with an average of 57). There were 38 deaths from enteritis (a term used frequently to represent the same disease as diarrhœa) as compared with an average of 14. Tubercular diseases caused 37 deaths, or 9 more than the annual average.

The subject of infantile diarrhœa was fully discussed in the reports for 1895 (page 92 *et. seq.*) and 1897 (page 55 *et. seq.*), and it will serve no useful purpose to re-iterate on the present occasion what was then written.

The infantile mortality in 1898 was at the rate of 160 per 1,000 births registered, as compared with 148 in 1897 and a decennial mean rate of 149. In Table 14 will be found the mortality rates which prevailed in several of the Metropolitan Sanitary Districts, and in Table 18 the local rates for 1888-97 and 1898 are contrasted with those prevailing in the country generally. In North Paddington last year's infantile mortality was 163 per 1,000 births, and in South, 140.

TABLE 25.

Mortalities prevailing at various ages under one year per  
1,000 estimated living or surviving at each age.

|          |               | AGES.   |      |      |      |      |      |      |      |      |      |      |      |
|----------|---------------|---------|------|------|------|------|------|------|------|------|------|------|------|
|          |               | Months. |      |      |      |      |      |      |      |      |      |      |      |
|          |               | 0-      | 1-   | 2-   | 3-   | 4-   | 5-   | 6-   | 7-   | 8-   | 9-   | 10-  | 11-  |
| Males.   | ST. MARY.     |         |      |      |      |      |      |      |      |      |      |      |      |
|          | Lives at Risk | 1267    | 1196 | 1161 | 1139 | 1122 | 1123 | 1134 | 1123 | 1112 | 1084 | 1095 | 1080 |
|          | Deaths ...    | 77      | 32   | 19   | 22   | 14   | 14   | 16   | 11   | 22   | 9    | 16   | 14   |
| Females. | Mortality ... | 60.7    | 26.7 | 16.3 | 19.3 | 12.4 | 12.4 | 14.1 | 9.7  | 19.7 | 8.3  | 14.6 | 12.9 |
|          | Lives at Risk | 1286    | 1260 | 1231 | 1222 | 1203 | 1181 | 1202 | 1199 | 1211 | 1179 | 1169 | 1134 |
|          | Deaths ...    | 45      | 13   | 11   | 19   | 10   | 7    | 10   | 9    | 7    | 4    | 10   | 9    |
| Males.   | ST. JOHN.     |         |      |      |      |      |      |      |      |      |      |      |      |
|          | Lives at Risk | 207     | 205  | 204  | 198  | 209  | 220  | 220  | 226  | 224  | 228  | 223  | 215  |
|          | Deaths ...    | 9       | 5    | 3    | 2    | —    | 2    | 2    | 2    | 3    | 2    | —    | 2    |
| Females. | Mortality ... | 43.4    | 24.3 | 14.7 | 10.1 | —    | 9.0  | 9.0  | 8.8  | 13.3 | 8.7  | —    | 9.3  |
|          | Lives at Risk | 191     | 181  | 172  | 173  | 168  | 167  | 173  | 180  | 178  | 172  | 179  | 182  |
|          | Deaths ...    | 7       | 4    | —    | 4    | —    | 1    | 3    | 1    | 2    | 1    | —    | —    |
| Males.   | PADDINGTON.   |         |      |      |      |      |      |      |      |      |      |      |      |
|          | Lives at Risk | 1474    | 1401 | 1365 | 1337 | 1331 | 1343 | 1354 | 1349 | 1336 | 1312 | 1318 | 1295 |
|          | Deaths ...    | 86      | 37   | 22   | 24   | 14   | 16   | 18   | 13   | 25   | 11   | 16   | 16   |
| Females. | Mortality ... | 58.3    | 26.4 | 16.1 | 17.9 | 10.5 | 11.9 | 13.2 | 9.6  | 18.7 | 8.3  | 12.1 | 12.3 |
|          | Lives at Risk | 1477    | 1441 | 1403 | 1395 | 1371 | 1348 | 1375 | 1379 | 1389 | 1351 | 1348 | 1316 |
|          | Deaths ...    | 52      | 17   | 11   | 23   | 10   | 8    | 13   | 10   | 9    | 5    | 10   | 9    |
| Persons. | Mortality ... | 35.4    | 11.7 | 7.8  | 16.4 | 7.2  | 5.9  | 9.4  | 7.2  | 6.4  | 3.7  | 7.4  | 6.8  |
|          | Lives at Risk | 2951    | 2842 | 2768 | 2732 | 2702 | 2691 | 2729 | 2728 | 2725 | 2663 | 2666 | 2611 |
|          | Deaths ...    | 138     | 54   | 33   | 47   | 24   | 24   | 31   | 23   | 34   | 16   | 26   | 25   |
|          | Mortality ... | 46.7    | 19.0 | 11.9 | 17.2 | 8.8  | 8.9  | 11.1 | 8.4  | 12.4 | 6.0  | 9.7  | 9.5  |

Table 26.

Infantile Mortality per 1,000 births prevailing during 1898 in different classes of inhabitants.

| Children of parents included in           | Born.  | Died under one year of age. | Death-rate per 1,000 births. |
|-------------------------------------------|--------|-----------------------------|------------------------------|
| Professional Class ... ..                 | 245    | 25                          | 102                          |
| Domestic Class ... ..                     | 107    | 46                          | 429                          |
| Commercial Class—                         |        |                             |                              |
| Merchants' Clerks ... ..                  | 184    | 28                          | 152                          |
| Railway Traffic ... ..                    | 78     | 17                          | 216                          |
| Road Traffic ... ..                       | 552    | 93                          | 168                          |
| Water Traffic ... ..                      | 10     | 1                           | 100                          |
| Other Occupations ... ..                  | 73     | —                           | —                            |
| Agricultural and Fishing Class ... ..     | 11     | 4                           | 363                          |
| Industrial Class—                         |        |                             |                              |
| Printing and Allied Trades ... ..         | 46     | 3                           | 65                           |
| Engineering ... ..                        | 59     | 12                          | 203                          |
| Building ... ..                           | 563    | 114                         | 202                          |
| Furniture ... ..                          | 37     | 2                           | 54                           |
| Coach Building ... ..                     | 42     | 5                           | 118                          |
| Tobacco ... ..                            | 5      | 1                           | 200                          |
| Drink ... ..                              | 49     | 9                           | 183                          |
| Provision ... ..                          | 214    | 33                          | 154                          |
| Dress ... ..                              | 135    | 21                          | 155                          |
| Refuse ... ..                             | 14     | 1                           | 71                           |
| Other Trades ... ..                       | 408    | 51                          | 125                          |
| Unspecified and unoccupied Classes ... .. | 119    | 9                           | 75                           |
| Totals ... ..                             | 2,951* | 475                         | 160                          |

NOTE—This Table is based on the classification employed in the Census (1891) Report.

Owing to differences in the descriptions of occupations of parents in the returns of births and deaths, it has been found very difficult to ensure that certain of the groups shall include the same classes. The results cannot be considered more than approximate.

\* This total represents children born during the year, not births registered.

An attempt has been made during the year to ascertain some of the factors giving rise to the present infantile mortality. The statistics for

a single year cannot be deemed conclusive, and those contained in Tables 25 and 26 must be regarded as provisional. They have been inserted in the belief that they will prove interesting.

### DEATHS OF ILLEGITIMATES.

The deaths of 60 illegitimate children were registered during the year, 41 under 1 year of age, and 19 at ages between 1 and 5 years. Of the 60 deaths, 52 were registered in North Paddington, and 8 in South. The mortality among illegitimate children under 1 year was at the rate of 338 per 1,000 illegitimate births, as compared with a rate of 146 among legitimate children. The appended statement shows the numbers of deaths due to certain causes, and the occupations of the mothers of the children. Inquests were held in respect of ten of the 60 deaths.

TABLE 27.—Deaths of Illegitimate Children.

| 1898.   |     |     |     |     | Paddington. |    |     |    |           |     |
|---------|-----|-----|-----|-----|-------------|----|-----|----|-----------|-----|
|         |     |     |     |     | 0-1         |    | 1-5 |    | 5 & over. |     |
|         |     |     |     |     | M.          | F. | M.  | F. | M.        | F.  |
| Quarter | 1st | ... | ... | ... | 7           | 2  | 6   | 4  | ...       | ... |
| "       | 2nd | ... | ... | ... | 1           | 1  | 1   | 3  | ...       | ... |
| "       | 3rd | ... | ... | ... | 13          | 10 | ... | 2  | ...       | ... |
| "       | 4th | ... | ... | ... | 4           | 3  | 2   | 1  | ...       | ... |
| Year    | ... | ... | ... | ... | 25          | 16 | 9   | 10 | ...       | ... |

## Causes of Death.

|                          |     |     |     | 0—1. |       | 1—5. |    |
|--------------------------|-----|-----|-----|------|-------|------|----|
|                          |     |     |     | M.   | F.    | M.   | F. |
| Measles                  | ... | ... | ... | 2    | 0     | 1    | 4  |
| Whooping cough           | ... | ... | ... | 0    | 0     | 4    | 1  |
| Diarrhoea                | ... | ... | ... | 6    | 6     | 0    | 0  |
| Syphilis                 | ... | ... | ... | 0    | 1     | 0    | 0  |
| Pyæmia                   | ... | ... | ... | 1    | 0     | 0    | 0  |
| Dietic Diseases          | ... | ... | ... | 1    | 0     | 0    | 0  |
| Tubercular Diseases      | ... | ... | ... | 1    | 1     | 0    | 1  |
| Developmental Diseases   | ... | ... | ... | 2    | 1     | 0    | 0  |
| Bronchitis and Pneumonia | ... | ... | ... | 0    | 1     | 2    | 2  |
| Gastro-enteritis         | ... | ... | ... | 4    | 1     | 0    | 0  |
| Violence and Accident    | ... | ... | ... | 4    | 3     | 0    | 0  |
| Ill-defined Causes       | ... | ... | ... | 3    | 1     | 0    | 0  |
| All other Causes         | ... | ... | ... | 1    | 1     | 2    | 2  |
| Totals                   |     |     |     | ...  | 25 16 | 9 10 |    |

## Occupations of Mothers.

|                                         |     |     |                |     |     |     |    |
|-----------------------------------------|-----|-----|----------------|-----|-----|-----|----|
| Domestic Employment                     | ... | ... | ...            | ... | ... | ... | 45 |
| General Servant                         | ... | 7   | Parlour-maid   | ... | ... | 1   |    |
| Kitchen-maid                            | ... | 2   | Nurse          | ... | ... | 2   |    |
| Cook                                    | ... | 9   | Servant        | ... | ... | 14  |    |
| House-maid                              | ... | 9   | Charwoman      | ... | ... | 1   |    |
| Commercial Employées                    | ... | ... | ...            | ... | ... | ... | 5  |
| Laundress                               | ... | 1   | Machinist      | ... | ... | 1   |    |
| Milliner                                | ... | 1   | Barmaid        | ... | ... | 2   |    |
| Miscellaneous Employments               | ... | ... | ...            | ... | ... | ... | 2  |
| Lady's Companion...                     | 1   |     | Hospital Nurse | ... | ... | 1   |    |
| No occupation, or occupation not stated | ... | ... | ...            | ... | ... | ... | 8  |

## INQUEST CASES.

During the year, 155 deaths were registered on the Coroner's certificate after inquest. The deaths included 89 from "natural causes," 2 "by misadventure," 47 from accidents, 10 from suicide, and with respect to 3 the findings were "open." (See Table 28.)

TABLE 28

Inquests on Parishioners, 1898.

| Finding of Jury.        | Paddington. | St. Mary. | St. John. |
|-------------------------|-------------|-----------|-----------|
| Natural Causes ... ..   | 89          | 70        | 19        |
| By Misadventure .. ...  | 2           | 2         | —         |
| Accidental Death ... .. | 47          | 37        | 10        |
| Manslaughter ... ..     | —           | —         | —         |
| Wilful Murder ... ..    | 4           | 3         | 1         |
| Suicide ... ..          | 10          | 7         | 3         |
| Open ... ..             | 3           | 2         | 1         |
| Totals... ..            | 155         | 121       | 34        |

The accidental deaths were attributed to the following causes :—

|                               |   |                                  |    |
|-------------------------------|---|----------------------------------|----|
| Vehicular Traffic ... ..      | 6 | Falls, not exactly specified ... | 13 |
| Railway do. ... ..            | 1 | Overlaid in bed ... ..           | 6  |
| Fires, not conflagrations ... | 7 | Drowned in Canals ... ..         | 2  |
| Accidents at Birth ... ..     | 4 | Building Operations ... ..       | 1  |

and one from each of the following miscellaneous causes :—

Choked whilst drunk.

Scratch by cat.

Infant hung in chair.

Nutshell in wind-pipe.

Electric current.

Window cleaning.

Splinter in finger.

## DEATHS IN INSTITUTIONS.

In the local institutions there were 600 deaths, including 303 of non-parishioners; and, in institutions beyond the limits of the Parish, 174 deaths of parishioners occurred. In all, 471 deaths of parishioners took place during the year in public institutions, equal to 23·2 per cent. of all deaths.

## LOCAL INSTITUTIONS.

|                                       |                                     |
|---------------------------------------|-------------------------------------|
| Paddington Workhouse & Infirmary ...  | 194, including 16 non-parishioners. |
| Lock Hospital ... ..                  | 2,     "     2     "                |
| Children's Hospital, Paddington Green | 80,     "     61     "              |
| St. Mary's Hospital ... ..            | 324,     "     224     "            |

## OUTLYING INSTITUTIONS.

|                                             |     |     |                   |                     |     |    |
|---------------------------------------------|-----|-----|-------------------|---------------------|-----|----|
| Hospitals of the Metropolitan Asylums Board | ... | ... | ...               | 45                  |     |    |
| Scarlet fever                               | ... | 5   | Diphtheria        | ...                 | ... | 35 |
| Enteric fever                               | ... | 2   | Other diseases... | ...                 | ... | 3  |
| General Hospitals                           | ... | ... | ...               | ...                 | ... | 38 |
| Cancer                                      | ... | ... | 3                 | Tubercular diseases | ... | 4  |
| Enteric fever                               | ... | 2   | Other diseases... | ...                 | ... | 28 |
| Special Hospitals                           | ... | ... | ...               | ...                 | ... | 19 |
| Cancer                                      | ... | ... | 1                 | Tubercular diseases | ... | 7  |
| Scarlet fever                               | ... | 1   | Other diseases    | ...                 | ... | 10 |
| "Homes"                                     | ... | ... | ...               | ...                 | ... | 9  |
| Tubercular diseases...                      | ... | 3   | Other diseases    | ...                 | ... | 6  |
| Lunatic Asylums                             | ... | ... | ...               | ...                 | ... | 42 |
| Tubercular diseases...                      | ... | 3   | Cancer            | ...                 | ... | 2  |
| Other diseases, 37.                         |     |     |                   |                     |     |    |
| Poor Law Institutions                       | ... | ... | ...               | ...                 | ... | 3  |
| Other diseases, 3.                          |     |     |                   |                     |     |    |
| "Elsewhere"                                 | ... | ... | ...               | ...                 | ... | 18 |
| Tubercular diseases...                      | ... | 1   | Cancer            | ...                 | ... | 1  |
| Other diseases, 16.                         |     |     |                   |                     |     |    |

Of the 174 deceased persons, 25 were residents of South Paddington.

## ADMINISTRATIVE WORK.

In so far as statistics can indicate the work accomplished by the Department, the year's record will be found in Table VI. in Appendix A.

*Prevention of Infectious Disease.*—During the year, 2,781 visits of inquiry were made with respect to infectious diseases, 1,259 rooms, as well as several schoolrooms after closure on account of measles, disinfected, and 44 tons of bedding, &c., removed for steam disinfection and purification. These figures include the extra work entailed by the epidemic of measles, proving that such work is not beyond the powers of the Department.

Under Sections 62 and 65 of the Public Health (London) Act, 1891, 139 "letters of advice," covering extracts from that Act, appropriate sheet of precautions to prevent the spread of infection, and blank certificate for the medical practitioner to certify the recovery of the patient and need of disinfection, were sent out. It is satisfactory to note that disinfection was done by the Vestry's Officer in all except 19 cases. An examination of the particulars relating to secondary attacks, indicates that in one case only (scarlet fever) was there any evidence pointing to insufficiency of disinfection.

*Schools.*—The Infant Departments of the under-mentioned schools were closed by order of the Vestry as the Sanitary Authority between the dates specified on account of the epidemic of measles :—

|                                |        |                        |
|--------------------------------|--------|------------------------|
| Board Schools, Campbell Street | ...    | March 15th—29th.       |
| St. Paul's Church Schools      | ... .. | March 29th—April 18th. |
| St. Mary's                     | ... .. | March 31st—April 18th. |

The attendances in the Infant Departments of some of the other schools were very greatly reduced, but closure was not found necessary. A special report dealing with each school was laid before the Committee, copies being sent to the Local Government Board, the County Council, and the School Managers, as required by the Order of the Local Government Board.

Closure of a part, or the whole, of a school is intended to limit the spread of infection, but under ordinary circumstances the intervention of the Sanitary Authority is not sought by the officers of the school for that reason. The grants under the Education Acts depend largely on the attendance arrived at by striking the average for the number of times in the year that the school registers are open and filled up. During a period of closure by the Sanitary Authority, the attendance on the days of closure (sufficient to make up 400 registers) is reckoned as being equal to the average calculated on the attendances of the rest of the year. It is to save the lowering of the average

that closure is sought in the majority of cases. Last year, however, the system of inquiry already described enabled action to be taken without waiting for the school staff to seek closure.

The class rooms of many of the infected schools were disinfected during the Easter Holidays by means of formaldehyde spray.

*Family Shelter.*—In the house provided for receiving families during the disinfection of their homes, 84 individuals were accommodated during the year, comprising 42 adults and 42 children, in 23 families, as compared with 144 individuals in 52 families received in 1897. The stay in each instance ranged from one night to three days. The house has occasionally been used to receive members of families of patients needing isolation in hospital, but for whom accommodation could not be immediately obtained. The annual expenditure is very trifling, under £50.

*Disinfection.*—Messrs. Armfield & Sons, the Contractors for the disinfection of bedding, &c., have done their work satisfactorily. During the year a total of £1,203 was paid for this work, as compared with £1,109, £1,284, and £881, in 1897, 1896, and 1895 respectively. The proposed Disinfecting Station will undoubtedly materially reduce the expenditure for this work.

The fumigation of sick-rooms has been mainly effected during the year with sulphur di-oxide gas, evolved from the combustion of cake sulphur, the alformant lamp (formaldehyde vapour) and the equifex spray ( $1\frac{1}{2}$  to 2 per cent. solution of formaldehyde) having been used in certain instances, generally when it has been necessary to get the work done quickly.

During the twelve months, £102 have been expended on disinfectants—viz., £54 for sulphur, £6 6s. for formaldehyde, and £42 for soap, powder, &c., for free distribution.

There is an increasing need of a reception-house for the bodies of persons dying in small tenements, both from infectious or other maladies. A scheme for new mortuary, &c., is before the Vestry, which includes a mortuary chapel—separate and distinct from the buildings set apart for inquest purposes.

*Houses let in Lodgings.*—The registration of these houses in pursuance of Section 94 of the Public Health (London) Act, 1891, was commenced at about the middle of 1897, when an additional (temporary) Inspector was appointed. The work was carried on practically without interruption up to the middle of February, 1898, when the Inspector (Mr. Geo. White) resigned to take an appointment at Hackney. The vacancy thus created had not been filled up at the end of the year.

Between January 1st and the middle of February eight houses were visited for the purposes of registration, one demand for particulars was issued, and 256 rooms were measured up, and their cubic contents calculated. At the end of the year 130 houses were on the Register. Many of the registered houses were inspected during 1898 with a view to bringing them up to the requirements of the Bye-laws relating to Houses let in Lodgings. The extra closet accommodation required in Clarendon and Woodchester Streets is being provided, but this work was not nearly complete at the end of the year. The white-washing and cleansing done in these houses in the spring has, without doubt, had a good effect. The streets have been freer from infectious diseases than they have been for several years. Many of the landlords of houses in these streets have expressed their approval of the work of registration, and application for registration has been made to the Department in a few instances by landlords of houses in other streets.

*House Drainage.*—The London County Council have not yet issued Bye-laws under the 202nd Section of the Metropolis Local Management Act, 1855, a draft of which was sent to the Vestry in January, 1897.

During the year several systems of combined drainage have been dealt with. Orders were made

under Section 74 of that Act dealing with combined systems of drainage :—

- Nos. 142—148 (even), Westbourne Terrace.
- Nos. 19—21 and Nos. 21—27 (odd), Hatherley Grove.
- Nos. 3 and 5, Lanark Villas.
- Nos. 8 and 9, North Wharf Road.

In each case of old work, application for consent of the Vestry was made in the first place.

Orders for re-construction of combined drainage were issued in respect of :—

- Nos. 24—44 (even), Blomfield Street.—Case pending.
- Nos. 21—42 (even), Warwick Road.—Work done by the Vestry, Owners of the houses paying half the cost.
- Nos. 8—28 (even), Waverley Road; 1—7 (odd), Orchard Street; and 1—13 (odd), Alfred Road.—Case pending.

The undermentioned combined systems have been re-constructed by the Vestry :—

- Nos 2—60 (even), Alfred Road.
- Nos. 3, 5, and 7, Westbourne Park Road.
- Nos. 15—20, Randolph Road.
- No. 23, Blomfield Road, and No. 18, Warwick Road.
- Nos. 8, 9, and 10, York Row, and Nos. 4 and 5, Warwick Place.

The combined drain at Nos. 18 and 19, Shelden Street was broken up during the year, the main sewer being extended and new connections made by the Vestry for this purpose.

*Trade Supervision.*—The cowsheds, slaughter-houses, and bake-houses in the Parish have been inspected at the end of each half-year, and at such other times as appeared necessary.

Under the 26th Section of the Factory and Workshop Act, 1891, the District Inspector of Factories forwards to the Sanitary Authority notices of new workshops opened in the Parish. During the year eight such notices have been received, the workrooms being duly inspected and entered on the Register. When a workshop is first inspected, all the workrooms are measured, particulars entered in the Register, and cards (one to be hung in each room) issued to the proprietor indicating the number to be employed therein. The total number of rooms so inspected, measured, and entered in the Register during the year was 51. The District Inspector of Factories also forwarded five complaints of insanitary conditions in workrooms, all of dirty premises. The matters complained of were remedied as soon as brought to the notice of the occupiers of the workrooms. The total number of inspections under the Factory Acts excluding bake-houses, was 67.

More work was done under the Factory and Workshop Acts during 1898, but even now the supervision exercised cannot be deemed adequate. The work of the Department connected with sickness, complaints, relaying of drains, and nuisances, leaves but an inadequate allowance of time for the supervision of workshops and factories.

*Smoke Nuisance.*—The suppression of nuisance from black smoke occupied a considerable amount of

the time of the officers of the Department during the summer months, owing chiefly to the Welsh Coal Strike, which extended from about April 1st to September 1st. All the manufacturing chimneys were watched, and notices under Section 24 of the Public Health (London) Act were served in respect of several of them. By the use of coke, special apparatus, &c., the nuisance was abated by all but two of the parties or firms concerned. Summonses were taken out against the Deburgo Cycle Works in Amberley Road and the Metropolitan Electric Supply Company, Ltd., in respect of the generating station in Ashmore Road. In the former case, the works were closed almost immediately after the issue of the summons, and the same was adjourned *sine die*. The latter case was, after several hearings, brought to a successful issue. The following is a brief account of the proceedings :—

The Electric Light Company having failed to comply with the notice served on them to abate the nuisance caused by the escape of black smoke, a summons was taken out, and the case came before Mr. Lane, Q.C., on May 26th. The Company admitted the nuisance, but pleaded lack of Welsh coal and their inability to deal with soft coal through their furnaces being constructed for smokeless coal. The case was then adjourned *sine die*.

Between May 26th and June 16th frequent reports were made of smoke nuisance by the Vestry's Officers, and further complaints were received from the London County Council. The Vestry then directed the summons to be re-inserted in the cause list, and counsel to be briefed. The adjourned summons was heard on June 30th, when Mr. Byron appeared for the Vestry. The Company again admitted the offence, but pleaded that sufficient Welsh coal could not be obtained, and that, failing that supply, they had done their best to minimise the amount

of smoke escaping. It was given in evidence by one of the Inspectors of the London County Council that there were seven generating stations within the area inspected by him; that there had been no complaints touching four of the seven; that the three stations complained of belonged to the defendant Company; and that, of the three, the station in Amberley Road was the worst. The Officers of the Vestry stated that complaints had been made of smoke nuisance from the furnaces used by the Guardians of Paddington and the proprietors of Fox's Bedding Factory in Harrow Road; that notices had been served on these parties; and that they had subsequently abated the nuisance. It was also put in that there were other chimneys in the district of which no complaint had been made.

Mr. Lane, at the conclusion of the case, remarked that the Vestry ought to have called the engineers or other officers of the stations reputed to have caused no nuisance; that all the evidence before him went to prove that the defendant Company had done their best to minimise the nuisance for which they were not responsible, having regard to the coal strike; and therefore he dismissed the summons. No order was made as to costs.

Subsequent to the above decision complaints of black smoke were of almost daily occurrence.

A further summons was subsequently taken out against the Company, under the same section, the case being heard by Mr. Curtis Bennett on August 11th and 13th. The Company admitted the nuisance, but pleaded inability to get Welsh coal and the obligation to carry out the duties imposed by their Order. Evidence was given on behalf of the Vestry that by suitable alterations in the boiler plant, smoke shaft, &c., it would be possible to use soft coal without giving rise to nuisance. Mr. Bennett decided that there was nothing in the Company's Order requiring them to use smokeless coal; that the Company had caused a nuisance by their act, default, or sufferance, and that by proper alterations the ordinary softer kinds of coal could be used without giving rise to nuisance. He made an order for the nuisance to be abated within nine months and gave the Vestry 20 guineas costs.

When the time (nine months) in which the Order was to be complied with was specified, the Magistrate's attention was called by the Counsel for the Vestry, that such order apparently gave the Company freedom to continue the nuisance indefinitely. Mr. Bennett, however, replied that a fresh summons could be taken if the nuisance continued without diminution or got worse.

There was some indication of improvement for the first days after the decision of the case, but the smoke then became denser and more continuous, culminating on the nights of the 14th and 15th September in continuous streams of the densest and blackest smoke observed during the coal strike. The Solicitor to the Vestry was instructed on September 6th to bring the fact of the continued and increasing nuisance to Mr. Bennett's notice. This was done on the 8th of that month, and in consequence a fresh summons for nuisance from black smoke (not for non-compliance with the Order of August 13th) was issued under the 24th Section of the Public Health (London) Act, 1891. After various delays the case was heard on 21st October, by Mr. Bennett. Evidence was given on behalf of the Vestry as to the continuance of the nuisance and to its increase in the early days of September, and as to the possibility of hard Welsh coal being obtainable in certain quantities throughout the strike. The Company endeavoured to show that they had adopted every possible precaution to get rid of the nuisance and had given their coal merchants a free hand with instruction to supply the best coal obtainable. Mr. Bennett, however, found that the Company had not used the best means practicable, as it was proved that the nuisance was worse on certain days than others, and during the absence of a certain official on leave than when he was in charge of the station. He fined the Company £5 with 10 guineas costs.

The strike ended on the 1st of September and on the 20th or 21st of that month Welsh coal was again obtainable. Since that date there has been no nuisance from smoke. The Company are now under orders to adapt their boiler, plant, furnaces, and shaft, by alterations, etc., so that coal, other than smokeless Welsh, may, if occasion arise, be used without giving rise to nuisance. If further proceedings be necessary at any future period, such proceedings will apparently be for a penalty for non-compliance with the Magistrate's Order.

*Manure Nuisance.*—In May, 1898, a notice requiring the removal of manure from stables every

48 hours was made under Section 36, Sub-section 2, of the Public Health (London) Act, 1891. This Order was posted extensively throughout the Parish, and a small hand-bill containing the Order was left at each stable. There can be no doubt that the Order was beneficial, and there were certainly fewer complaints of nuisance from non-removal.

*Ice Creams.*—A number of samples of the "ice cream" sold by street vendors and in shops were examined bacteriologically at the end of August. Two facts were brought out; (1), that the compound sold by the street vendors, being made by boiling the ingredients previous to freezing, contained as a rule fewer micro-organisms than that sold by the better-class manufacturers, who make their cream ices from cream and fruit, not from custard; and (2), that the premises occupied by the former class of makers require supervision, to ensure that the ices shall not be exposed to exhalations from drains, etc. There are only a few itinerant makers and vendors resident in this Parish, and, as a result of last year's work, their places are in a much-improved condition. A full report on the subject was submitted to the Vestry in the Autumn.

*Canals and Canal Boats.*—The concreting of the Paddington Basin, up to the Harrow Road Bridge, was completed on the occasion of the annual (Easter) clean up. Certain unsatisfactory patches of old concrete were also repaired.

The Annual Report on the Canal Boats was presented to the Vestry in January of this year. There was nothing in it worthy of special note here.

*Legal Proceedings.*—The notices issued during the year numbered 793, 267 fewer than in 1897, and included 558 written intimations pursuant to Section 3 of the Public Health (London) Act, 1891, 81 notices under the 4th and other Sections of that Act, and 154 notices of infringement of Bye-laws made under the same Act. Ten summonses were issued under the Act, that number, however, not representing the total number of instances in which legal proceedings were authorised. In all cases, other than the ten in question, the works necessary were carried out without the issue of a summons. The cases heard before the Magistrate were :—

|                         |                  |            |           |                 |
|-------------------------|------------------|------------|-----------|-----------------|
| 88, Waltherton Road     | ...              | Order made | ...       | £5 5s. costs.   |
| 277, Harrow Road        | ...              | do.        | ...       | £1 3s. costs*.  |
| 25, Clarendon Street    | ...              | do.        | ...       | 12s. 6d. costs. |
| 39 and 45, „            | ...              | Fined 20s. | ...       | 12s. 6d. costs. |
| 20, „                   | ...              | do.        | ...       | 12s. 6d. costs. |
| 18, Warrington Crescent | Dismissed        | ...        | No costs. |                 |
| 15, Kilburn Park Road   | Order by consent | do.        |           |                 |
| 42A, Elgin Avenue       | ...              | Order made | ...       | £2 2s costs*.   |

\* These costs have not been recovered.

#### SMOKE NUISANCES.

|                                        |     |             |                       |
|----------------------------------------|-----|-------------|-----------------------|
| Metropolitan Electric Supply Co., Ltd. | ... | Dismissed.  | No order as to costs. |
| De Burgo Cycle Works, Ashmore Road     | ... | Adjourned   | <i>sine die</i> .     |
| Metropolitan Electric Supply Co., Ltd. | ... | Order made. | £21 costs.            |
| " " " "                                | ... | Fined £5.   | £10 10s. costs.       |

Under the Sale of Food and Drugs Acts, 32 summonses were taken out, the results of the same being set out below :—

## FOR YEAR 1898.

| Sample<br>Adulterated. | Extent of Adulteration.    |     |     |     | Fine<br>Imposed. |    |    | Costs<br>Imposed. |    |    |
|------------------------|----------------------------|-----|-----|-----|------------------|----|----|-------------------|----|----|
|                        |                            |     |     |     | £.               | s. | d. | £                 | s. | d. |
| Milk ...               | 9% added water (dismissed) | ... | ... | ... | —                | —  | —  | —                 | —  | —  |
| do. ...                | 11% do.                    | ... | ... | ... | 1                | 0  | 0  | 1                 | 13 | 6  |
| do. ...                | 37% do.                    | ... | ... | ... | 1                | 10 | 0  | 0                 | 12 | 6  |
| Butter ...             | 83% Margarine              | ... | ... | ... | 0                | 10 | 0  | 0                 | 12 | 6  |
| do. ...                | 88% do.                    | ... | ... | ... | 2                | 0  | 0  | 0                 | 2  | 0  |
| do. ...                | 88% do.                    | ... | ... | ... | —                | —  | —  | 2                 | 2  | 0  |
| Coffee ...             | 50% Chicory ...            | ... | ... | ... | —                | —  | —  | —                 | —  | —  |
| Butter ...             | 84% Margarine              | ... | ... | ... | 1                | 0  | 0  | 1                 | 5  | 0  |
| Milk ...               | 6% added Water             | ... | ... | ... | 1                | 0  | 0  | 0                 | 12 | 6  |
| do. ...                | 30% Cream deficient        | ... | ... | ... | —                | —  | —  | 1                 | 1  | 0  |
| Butter ...             | 77% Margarine              | ... | ... | ... | 2                | 0  | 0  | 0                 | 12 | 6  |
| do. ...                | 88% do.                    | ... | ... | ... | 5                | 0  | 0  | 0                 | 12 | 6  |
| do. ...                | 70% do.                    | ... | ... | ... | 1                | 0  | 0  | 0                 | 12 | 6  |
| Coffee ...             | 40% Chicory ...            | ... | ... | ... | 1                | 0  | 0  | 0                 | 12 | 6  |
| Milk ...               | 13% added Water            | ... | ... | ... | 0                | 10 | 0  | 0                 | 12 | 6  |
| do. ...                | 9% do.                     | ... | ... | ... | 0                | 10 | 0  | 0                 | 12 | 6  |
| do. ...                | 27% do.                    | ... | ... | ... | 10               | 0  | 0  | 2                 | 2  | 0  |
| do. ...                | 17% do.                    | ... | ... | ... | 1                | 0  | 0  | 0                 | 12 | 6  |
| do. ...                | 10% do.                    | ... | ... | ... | 1                | 0  | 0  | 1                 | 3  | 0  |
| do. ...                | 9% do.                     | ... | ... | ... | —                | —  | —  | —                 | —  | —  |
| Butter ...             | 100% Margarine             | ... | ... | ... | 2                | 10 | 0  | 0                 | 12 | 6  |
| do. ...                | 95% do.                    | ... | ... | ... | 1                | 0  | 0  | 0                 | 12 | 6  |
| do. ...                | 80% do.                    | ... | ... | ... | 2                | 10 | 0  | 0                 | 12 | 6  |
| do. ...                | 82% do.                    | ... | ... | ... | 4                | 0  | 0  | 0                 | 12 | 6  |
| do. ...                | 100% do.                   | ... | ... | ... | 5                | 0  | 0  | 0                 | 12 | 6  |
| do. ...                | 49% do.                    | ... | ... | ... | 1                | 0  | 0  | 0                 | 12 | 6  |
| do. ...                | 97% do.                    | ... | ... | ... | 2                | 0  | 0  | 0                 | 12 | 6  |
| Milk ...               | 7% added Water             | ... | ... | ... | 0                | 10 | 0  | 0                 | 12 | 6  |
| Butter ...             | 80% Margarine              | ... | ... | ... | 2                | 0  | 0  | 0                 | 12 | 6  |
| do. ...                | 94% do.                    | ... | ... | ... | 2                | 0  | 0  | 0                 | 12 | 6  |
| Coffee ...             | 45% Chicory ...            | ... | ... | ... | 2                | 0  | 0  | 0                 | 12 | 6  |
| Milk ...               | 7% added Water             | ... | ... | ... | 1                | 0  | 0  | 0                 | 16 | 6  |



TABLE I.

| Year.                           | Estimated Populations at<br>Middle of each Year. |           | Births Registered. |           | Deaths of Parishioners. |           |
|---------------------------------|--------------------------------------------------|-----------|--------------------|-----------|-------------------------|-----------|
|                                 | St. Mary.                                        | St. John. | St. Mary.          | St. John. | St. Mary.               | St. John. |
| 1898 ...                        | 94,248                                           | 33,430    | 2,558              | 407       | 1,663                   | 367       |
| 1897 ...                        | 92,788                                           | 33,465    | 2,586              | 424       | 1,455                   | 355       |
| 1896 ...                        | 91,350                                           | 33,500    | 2,613              | 455       | 1,583                   | 359       |
| 1895 ..                         | 90,577                                           | 32,173    | 2,526              | 453       | 1,671                   | 428       |
| 1894 ...                        | 88,949                                           | 32,551    | 2,423              | 411       | 1,449                   | 382       |
| 1893 ...                        | 87,708                                           | 32,772    | 2,567              | 444       | 1,680                   | 473       |
| 1892 ...                        | 86,111                                           | 33,149    | 2,456              | 478       | 1,632                   | 510       |
| 1891 ...                        | 84,156                                           | 33,682    | 2,420              | 532       | 1,590                   | 520       |
| 1890 ...                        | 82,091                                           | 36,645    | 2,389              | 512       | 1,602                   | 502       |
| 1889 ...                        | 80,324                                           | 36,786    | 2,346              | 517       | 1,266                   | 398       |
| 1888 ...                        | 78,939                                           | 36,810    | 2,331              | 512       | 1,472                   | 444       |
| H 2 Averages for {<br>1888-97 } | 85,863                                           | 35,137    | 2,465              | 473       | 1,540                   | 427       |

TABLE II.

| Year.                          | Per 1,000 of Estimated Population. |                        | Deaths of Infants under 1 year. |                               | Deaths of Children aged under 5 years per 1,000 Deaths at all ages. | Deaths in Public Institutions.      |                      |                |                                        |                        |
|--------------------------------|------------------------------------|------------------------|---------------------------------|-------------------------------|---------------------------------------------------------------------|-------------------------------------|----------------------|----------------|----------------------------------------|------------------------|
|                                | Birth-rates.                       | Corrected Death-rates. | Per 1,000 Births Registered.    | Per 1,000 Deaths at all ages. |                                                                     | Paddington Workhouse and Infirmary. | St. Mary's Hospital. | Lock Hospital. | Children's Hospital, Paddington Green. | Outlying Institutions. |
| 1898 ..                        | 23·22                              | 15·19                  | 160                             | 234                           | 376                                                                 | 194                                 | 324                  | 2              | 80                                     | 174                    |
| 1897 ...                       | 23·8                               | 14·3                   | 148                             | 263                           | 396                                                                 | 192                                 | 262*                 | 2              | 63                                     | 163                    |
| 1896 ...                       | 24·2                               | 15·3                   | 155                             | 245                           | 398                                                                 | 188                                 | 334                  | 2              | 48                                     | 160                    |
| 1895 ...                       | 24·3                               | 17·1                   | 164                             | 233                           | 330                                                                 | 204                                 | 332                  | 1              | 17**                                   | 156                    |
| 1894 ...                       | 23·3                               | 15·0                   | 135                             | 210                           | 351                                                                 | 165                                 | 347                  | 3              | †                                      | 193                    |
| 1893 ...                       | 25·2                               | 17·9                   | 148                             | 209                           | 321                                                                 | 204                                 | 399                  | 3              | †                                      | 172                    |
| 1892 ...                       | 24·6                               | 18·0                   | 148                             | 203                           | 319                                                                 | 236                                 | 355                  | 7              | 12                                     | 120                    |
| 1891 ...                       | 25·1                               | 17·9                   | 148                             | 207                           | 298                                                                 | 257                                 | 371                  | 5              | 62                                     | 105                    |
| 1890 ...                       | 24·4                               | 17·7                   | 157                             | 216                           | 347                                                                 | 172                                 | 358                  | 3              | 57                                     | 100                    |
| 1889 ...                       | 24·5                               | 14·2                   | 138                             | 238                           | 333                                                                 | 172                                 | 344                  | 2              | 70                                     | 70                     |
| 1888 ...                       | 24·6                               | 16·6                   | 133                             | 193                           | 343                                                                 | 207                                 | 334                  | 5              | 64                                     | 78                     |
| Averages for }<br>1888-1897. } | 24·40                              | 16·40                  | 147                             | 221                           | 343                                                                 | 199                                 | 343                  | 3              | { 53<br>(7 years)                      |                        |

\* Hospital closed for some weeks for repairs, &amp;c.

\*\* Hospital recommenced work in 3rd quarter of the year.

† Closed during re-construction.

TABLE IV.

Showing the Number of Deaths at all ages in 1898, from certain groups of Diseases, and proportions to 1,000 of Population, and to 1,000 Deaths from all causes; also the Number of Deaths of Infants under one year of age from other groups of Diseases, and proportions to 1,000 Births and to 1,000 Deaths from all causes under one year.

| Division I.<br>(all ages).                   | Total<br>Deaths<br>registered. | Deaths<br>per 1,000 of<br>Population,<br>at all ages. | Deaths<br>per 1,000 of<br>Total Deaths,<br>at all ages.   |
|----------------------------------------------|--------------------------------|-------------------------------------------------------|-----------------------------------------------------------|
| 1. Principal Zymotic<br>Diseases ... }       | 315                            | 2.46                                                  | 155.1                                                     |
| 2. Pulmonary Diseases...                     | 350                            | 2.74                                                  | 172.4                                                     |
| 3. Principal Tubercular<br>Diseases ... }    | 211                            | 1.65                                                  | 103.9                                                     |
| Division II.<br>(Infants under One<br>Year). | Total<br>Deaths.               | Deaths<br>per 1,000 of<br>Births.                     | Deaths<br>per 1,000 of<br>Total Deaths<br>under One Year. |
| 4. Wasting Diseases ...                      | 114                            | 38.4                                                  | 239.0                                                     |
| 5. Convulsive Diseases...                    | 38                             | 12.8                                                  | 79.6                                                      |

## NOTICE.

1. Includes Smallpox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Typhus, Enteric (or Typhoid), and Simple Continued Fevers, and Diarrhœa. 14 of the deaths occurred in Hospitals situated beyond the limits of the District.
3. Includes Phthisis, Scrofula, Tuberculosis, Rickets, and Tabes Mesenterica.
4. Includes Marasmus, Atrophy, Debility, Want of Breast Milk, and Premature Birth.
5. Includes Hydrocephalus, Infantile Meningitis, Convulsions, and Teething.

TABLE III.

## MALES. WHOLE PARISH.

## Deaths Registered from all Causes during the Year 1898.

NOTE.—The Deaths of Non-Residents occurring in Public Institutions situated in the District are excluded, and the Deaths of Residents occurring in Public Institutions situated beyond the limits of the District are included.

| GROUPS OF DISEASES.                                              | AGES. |     |     |     |     |     |     |     |     |     |     | All Ages. |
|------------------------------------------------------------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|
|                                                                  | 0-    | 1-  | 5-  | 15- | 25- | 35- | 45- | 55- | 65- | 75- | 85- |           |
| CLASSES.                                                         |       |     |     |     |     |     |     |     |     |     |     |           |
| I. SPECIFIC FEBRILE, OR ZYMOTIC DISEASES                         | 79    | 77  | 13  | 4   | 5   | 5   | 5   | 6   | 6   | 3   | ... | 203       |
| II. PARASITIC DISEASES ... ..                                    | ...   | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ...       |
| III. DIETIC DISEASES ... ..                                      | 2     | ... | ... | ... | ... | 1   | 1   | 4   | ... | ... | ... | 8         |
| IV. CONSTITUTIONAL DISEASES ... ..                               | 25    | 15  | 7   | 13  | 19  | 25  | 42  | 19  | 13  | 6   | ... | 184       |
| V. DEVELOPMENTAL DISEASES ... ..                                 | 52    | ... | ... | ... | ... | ... | ... | ... | 4   | 11  | 4   | 71        |
| VI. LOCAL DISEASES ... ..                                        | 102   | 51  | 15  | 13  | 21  | 31  | 58  | 57  | 65  | 48  | 8   | 469       |
| VII. DEATHS FROM VIOLENCE ... ..                                 | 8     | 4   | 4   | 4   | 5   | 4   | 2   | 5   | 2   | 1   | ... | 39        |
| VIII. DEATHS FROM ILL-DEFINED and NOT<br>SPECIFIED CAUSES ... .. | 30    | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | 31        |
| TOTALS ... ..                                                    | 298   | 147 | 39  | 34  | 50  | 66  | 108 | 91  | 91  | 69  | 12  | 1005      |

I.—SPECIFIC FEBRILE, OR  
ZYMOTIC DISEASES.

## 1.—MIASMATIC DISEASES.

|                                 |     |     |     |     |     |     |     |     |     |     |     |    |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Measles ... ..                  | 11  | 35  | 2   | ... | ... | ... | ... | ... | ... | ... | ... | 48 |
| Scarlet Fever ... ..            | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | ... | 1  |
| Epidemic Influenza ... ..       | 3   | 3   | ... | ... | 1   | 3   | 3   | 5   | 3   | 2   | ... | 23 |
| Whooping Cough ... ..           | 9   | 9   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 18 |
| Diphtheria ... ..               | 3   | 25  | 9   | 1   | ... | 1   | ... | ... | ... | ... | ... | 39 |
| Enteric or Typhoid Fever ... .. | ... | ... | 1   | 3   | 4   | ... | ... | 1   | ... | ... | ... | 9  |

## 2.—DIARRHOEAL DISEASES.

|                            |    |   |     |     |     |     |     |     |   |     |     |    |
|----------------------------|----|---|-----|-----|-----|-----|-----|-----|---|-----|-----|----|
| Diarrhœa, Dysentery ... .. | 48 | 3 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 52 |
|----------------------------|----|---|-----|-----|-----|-----|-----|-----|---|-----|-----|----|

## 3.—MALARIAL DISEASES.

|                        |     |     |     |     |     |     |   |     |     |     |     |   |
|------------------------|-----|-----|-----|-----|-----|-----|---|-----|-----|-----|-----|---|
| Remittent Fever ... .. | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |
|------------------------|-----|-----|-----|-----|-----|-----|---|-----|-----|-----|-----|---|

## 4.—ZOOGENOUS DISEASES.

## 5.—VENEREAL DISEASES.

|                 |   |     |     |     |     |     |     |     |   |     |     |   |
|-----------------|---|-----|-----|-----|-----|-----|-----|-----|---|-----|-----|---|
| Syphilis ... .. | 3 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 4 |
|-----------------|---|-----|-----|-----|-----|-----|-----|-----|---|-----|-----|---|

TABLE III.  
WHOLE PARISH. FEMALES.

Deaths Registered from all Causes during the Year 1898.

NOTE.—The Deaths of Non-Residents occurring in Public Institutions situated in the District are excluded, and the Deaths of Residents occurring in Public Institutions situated beyond the limits of the District are included.

| GROUPS OF DISEASES.                                                  | AGES. |     |     |     |     |     |     |     |     |     |     | All Ages. |
|----------------------------------------------------------------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|
|                                                                      | 0-    | 1-  | 5-  | 15- | 25- | 35- | 45- | 55- | 65- | 75- | 85- |           |
| I. SPECIFIC FEBRILE, OR ZYMOTIC DISEASES                             | 60    | 75  | 15  | 8   | 6   | 4   | 7   | 7   | 17  | 8   | ..  | 207       |
| II. PARASITIC DISEASES ... ..                                        | ...   | ... | ... | 1   | 1   | ... | ... | ... | ... | ... | ... | 2         |
| III. DIETIC DISEASES ... ..                                          | ...   | ... | ... | ... | 1   | 1   | 4   | 2   | 1   | ... | ... | 9         |
| IV. CONSTITUTIONAL DISEASES ... ..                                   | 13    | 16  | 6   | 16  | 24  | 28  | 31  | 28  | 27  | 15  | 3   | 207       |
| V. DEVELOPMENTAL DISEASES ... ..                                     | 27    | 1   | ... | ... | ... | ... | ... | 1   | 12  | 25  | 14  | 80        |
| VI. LOCAL DISEASES ... ..                                            | 45    | 45  | 10  | 12  | 24  | 33  | 53  | 57  | 91  | 76  | 18  | 464       |
| VII. DEATHS FROM VIOLENCE ... ..                                     | 9     | 3   | ... | 1   | 2   | 4   | 2   | ... | 3   | ... | 3   | 27        |
| VIII. DEATHS FROM ILL-DEFINED and NOT }<br>SPECIFIED CAUSES ... .. } | 24    | 1   | ... | ... | ... | ... | ... | 1   | 1   | 1   | 1   | 29        |
| TOTALS ... ..                                                        | 174   | 141 | 31  | 38  | 58  | 70  | 97  | 96  | 152 | 125 | 39  | 1025      |
| <b>I.—SPECIFIC FEBRILE, OR ZYMOTIC DISEASES.</b>                     |       |     |     |     |     |     |     |     |     |     |     |           |
| 1.—MIASMATIC DISEASES.                                               |       |     |     |     |     |     |     |     |     |     |     |           |
| Measles ... ..                                                       | 7     | 33  | 1   | ... | ... | ... | ... | ... | ... | ... | ... | 41        |
| Scarlet Fever ... ..                                                 | ...   | 4   | 3   | ... | ... | ... | ... | ... | ... | ... | ... | 7         |
| Epidemic Influenza ... ..                                            | 1     | 4   | 1   | 1   | 2   | 2   | 5   | 5   | 15  | 8   | ... | 44        |
| Whooping Cough ... ..                                                | 11    | 15  | 1   | ... | ... | ... | ... | ... | ... | ... | ... | 27        |
| Diphtheria ... ..                                                    | 2     | 14  | 7   | 1   | ... | 1   | ... | ... | ... | ... | ... | 25        |
| Enteric or Typhoid Fever ... ..                                      | ...   | ... | 2   | 3   | 2   | ... | 1   | ... | ... | ... | ... | 8         |
| 2.—DIARRHOEAL DISEASES.                                              |       |     |     |     |     |     |     |     |     |     |     |           |
| Diarrhoea, Dysentery ... ..                                          | 33    | 5   | ... | ... | ... | ... | ... | 2   | ... | ... | ... | 40        |
| 3.—MALARIAL DISEASES.                                                |       |     |     |     |     |     |     |     |     |     |     |           |
| 4.—ZOÖGENOUS DISEASES.                                               |       |     |     |     |     |     |     |     |     |     |     |           |
| 5.—VENEREAL DISEASES.                                                |       |     |     |     |     |     |     |     |     |     |     |           |
| Syphilis... ..                                                       | 4     | ... | ... | ... | ... | 1   | ... | ... | ... | ... | ... | 5         |

## Males.

TABLE III. (continued).

| DISEASES.                                                             | AGES. |     |     |     |     |     |     |     |     |     |     | All Ages. |
|-----------------------------------------------------------------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|
|                                                                       | 0-    | 1-  | 5-  | 15- | 25- | 35- | 45- | 55- | 65- | 75- | 85- |           |
| SPECIFIC FEBRILE, OR ZYMOTIC DISEASES (continued).                    |       |     |     |     |     |     |     |     |     |     |     |           |
| 6.—SEPTIC DISEASES.                                                   |       |     |     |     |     |     |     |     |     |     |     |           |
| Erysipelas ... ..                                                     | 1     | 1   | ... | ... | ... | ... | ... | 1   | ... | ... | ... | 3         |
| Pyæmia, Septicæmia ... ..                                             | 1     | 1   | ... | ... | ... | 1   | 1   | ... | ... | 1   | ... | 5         |
| II.—PARASITIC DISEASES.                                               |       |     |     |     |     |     |     |     |     |     |     |           |
| III.—DIETIC DISEASES.                                                 |       |     |     |     |     |     |     |     |     |     |     |           |
| Want of Breast Milk, Starvation ... ..                                | 1     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1         |
| Scurvy ... ..                                                         | 1     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1         |
| Chronic Alcoholism ... ..                                             | ...   | ... | ... | ... | ... | 1   | 1   | 3   | ... | ... | ... | 5         |
| Delirium Tremens ... ..                                               | ...   | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | 1         |
| IV.—CONSTITUTIONAL DISEASES.                                          |       |     |     |     |     |     |     |     |     |     |     |           |
| Rheumatic Fever, Rheumatism of the Heart ... ..                       | ...   | ... | 2   | 1   | ... | ... | ... | ... | ... | ... | ... | 3         |
| Gout ... ..                                                           | ...   | ... | ... | ... | ... | ... | ... | ... | ... | 1   | ... | 1         |
| Rickets ... ..                                                        | ...   | 2   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2         |
| Cancer, Malignant Disease ... ..                                      | 1     | ... | ... | ... | ... | 3   | 7   | 7   | 8   | 5   | ... | 31        |
| Tabes Mesenterica ... ..                                              | 12    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 12        |
| Tubercular Meningitis, Hydrocephalus ... ..                           | 7     | 11  | 2   | ... | ... | ... | ... | ... | ... | ... | ... | 20        |
| Phthisis... ..                                                        | 3     | 1   | 2   | 10  | 18  | 22  | 33  | 7   | 2   | ... | ... | 98        |
| Other forms of Tuberculosis, Scrofula ... ..                          | 2     | 1   | 1   | 2   | 1   | ... | 1   | 1   | ... | ... | ... | 9         |
| Anæmia, Chlorosis, Leucocythæmia ... ..                               | ...   | ... | ... | ... | ... | ... | 1   | ... | 1   | ... | ... | 2         |
| Glycosuria, Diabetes Mellitus ... ..                                  | ...   | ... | ... | ... | ... | ... | ... | 4   | 2   | ... | ... | 6         |
| V.—DEVELOPMENTAL DISEASES.                                            |       |     |     |     |     |     |     |     |     |     |     |           |
| Premature Birth ... ..                                                | 39    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 39        |
| Atelectasis ... ..                                                    | 7     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 7         |
| Congenital Malformations ... ..                                       | 6     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 6         |
| Old Age .. ..                                                         | ...   | ... | ... | ... | ... | ... | ... | ... | 4   | 11  | 4   | 19        |
| VI.—LOCAL DISEASES.                                                   |       |     |     |     |     |     |     |     |     |     |     |           |
| 1.—DISEASES OF NERVOUS SYSTEM.                                        |       |     |     |     |     |     |     |     |     |     |     |           |
| Inflammation of Brain or Membranes ... ..                             | 1     | ... | ... | 3   | ... | 2   | 1   | 1   | ... | ... | ... | 8         |
| Apoplexy, Softening of Brain, Hemiplegia, {<br>Brain Paralysis ... .. | ...   | ... | ... | ... | ... | 1   | 3   | 6   | 9   | 7   | 3   | 29        |
| Insanity, General Paralysis of the Insane ... ..                      | ...   | ... | ... | ... | 2   | 1   | 1   | 1   | 1   | 2   | ... | 8         |
| Epilepsy ... ..                                                       | ...   | ... | 2   | ... | ... | 2   | 1   | 1   | ... | 1   | ... | 7         |
| Convulsions ... ..                                                    | 12    | 3   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 15        |
| Laryngismus Stridulus (Spasm of Glottis) ... ..                       | 2     | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3         |
| Disease of Spinal Cord, Paraplegia, {<br>Paralysis Agitans ... ..     | ...   | ... | ... | ... | 1   | 1   | 1   | 1   | 2   | ... | ... | 6         |
| Other Diseases of Nervous System ... ..                               | 1     | 1   | ... | ... | 1   | ... | 1   | ... | 1   | ... | ... | 5         |

TABLE III. (continued).

Females.

| DISEASES.                                                               | AGES. |     |     |     |     |     |     |     |     |     |     | All Ages. |
|-------------------------------------------------------------------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|
|                                                                         | 0-    | 1-  | 5-  | 15- | 25- | 35- | 45- | 55- | 65- | 75- | 85- |           |
| SPECIFIC FEBRILE, OR ZYMOTIC DISEASES (continued).                      |       |     |     |     |     |     |     |     |     |     |     |           |
| 6.—SEPTIC DISEASES.                                                     |       |     |     |     |     |     |     |     |     |     |     |           |
| Erysipelas ... ..                                                       | 2     | ... | ... | ... | 1   | ... | ... | ... | 2   | ... | ... | 5         |
| Pyæmia, Septicæmia ... ..                                               | ...   | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | 1         |
| Puerperal Fever ... ..                                                  | ...   | ... | ... | 3   | 1   | ... | ... | ... | ... | ... | ... | 4         |
| II.—PARASITIC DISEASES.                                                 |       |     |     |     |     |     |     |     |     |     |     |           |
| Worms, Hydatids, and other Animal Para-<br>sitic Diseases ... .. }      | ...   | ... | ... | 1   | 1   | ... | ... | ... | ... | ... | ... | 2         |
| III.—DIETIC DISEASES.                                                   |       |     |     |     |     |     |     |     |     |     |     |           |
| Chronic Alcoholism ... ..                                               | ...   | ... | ... | ... | 1   | 1   | 4   | 2   | 1   | ... | ... | 9         |
| IV.—CONSTITUTIONAL DISEASES.                                            |       |     |     |     |     |     |     |     |     |     |     |           |
| Rheumatic Fever, Rheumatism of the Heart. ... ..                        | ...   | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | 1         |
| Rickets ... ..                                                          | ...   | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1         |
| Cancer, Malignant Disease ... ..                                        | ...   | ... | ... | 1   | 1   | 6   | 16  | 20  | 23  | 14  | 3   | 84        |
| Tabes Mesenterica ... ..                                                | 2     | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3         |
| Tubercular Meningitis, Hydrocephalus ... ..                             | 8     | 8   | 1   | 3   | ... | ... | ... | ... | ... | ... | ... | 20        |
| Phthisis... ..                                                          | 2     | 5   | 1   | 7   | 20  | 20  | 12  | 5   | 2   | 1   | ... | 75        |
| Other forms of Tuberculosis, Scrofula ... ..                            | 1     | ... | 4   | 2   | 2   | 1   | 1   | ... | ... | ... | ... | 11        |
| Anæmia, Chlorosis, Leucocythæmia... ..                                  | ...   | 1   | ... | 1   | 1   | 1   | 1   | ... | 1   | ... | ... | 6         |
| Glycosuria, Diabetes Mellitus ... ..                                    | ...   | ... | ... | 1   | ... | ... | 1   | 3   | 1   | ... | ... | 6         |
| V.—DEVELOPMENTAL DISEASES.                                              |       |     |     |     |     |     |     |     |     |     |     |           |
| Premature Birth ... ..                                                  | 21    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 21        |
| Atelectasis ... ..                                                      | 3     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3         |
| Congenital Malformations ... ..                                         | 3     | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4         |
| Old Age... ..                                                           | ...   | ... | ... | ... | ... | ... | ... | 1   | 12  | 25  | 14  | 52        |
| VI.—LOCAL DISEASES.                                                     |       |     |     |     |     |     |     |     |     |     |     |           |
| 1.—DISEASES OF NERVOUS SYSTEM.                                          |       |     |     |     |     |     |     |     |     |     |     |           |
| Inflammation of Brain or Membranes ... ..                               | ...   | 1   | 1   | 3   | ... | ... | 2   | 1   | ... | ... | ... | 3         |
| Apoplexy, Softening of Brain, Hemiplegia, }<br>Brain Paralysis ... .. } | ...   | ... | ... | ... | ... | 1   | 3   | 14  | 10  | 17  | 3   | 48        |
| Insanity, General Paralysis of the Insane ... ..                        | ...   | ... | ... | 1   | ... | ... | 1   | ... | 1   | 1   | ... | 4         |
| Epilepsy ... ..                                                         | ...   | ... | 1   | 1   | 1   | ... | 2   | 1   | ... | ... | ... | 6         |
| Convulsions ... ..                                                      | 6     | 1   | 1   | ... | ... | ... | ... | ... | ... | ... | ... | 8         |
| Laryngismus Stridulus (Spasm of Glottis)... ..                          | ...   | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1         |
| Disease of Spinal Cord, Paraplegia, }<br>Paralysis Agitans ... .. }     | ...   | ... | ... | ... | ... | ... | ... | ... | 3   | 1   | ... | 4         |
| Other Diseases of Nervous System ... ..                                 | ...   | ... | 1   | ... | ... | 1   | ... | 1   | ... | 1   | 1   | 5         |

### Other Accidents of Child-Birth

TABLE III. (continued).

Females.

| DISEASES.                                          | AGES. |     |     |     |     |     |     |     |     |     |     | All Ages. |
|----------------------------------------------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|
|                                                    | 0-    | 1-  | 5-  | 15- | 25- | 35- | 45- | 55- | 65- | 75- | 85- |           |
| LOCAL DISEASES (continued).                        |       |     |     |     |     |     |     |     |     |     |     |           |
| 2.—DISEASES OF ORGANS OF SPECIAL SENSE.            |       |     |     |     |     |     |     |     |     |     |     |           |
| (e.g., of Ear, Eye, Nose) ... ..                   | ...   | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | 1         |
| 3.—DISEASES OF CIRCULATORY SYSTEM.                 |       |     |     |     |     |     |     |     |     |     |     |           |
| Pericarditis ... ..                                | ...   | 1   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1         |
| Acute Endocarditis ... ..                          | ...   | ... | ... | ... | ... | ... | 1   | ... | ... | ... | ... | 1         |
| Valvular Diseases of Heart ... ..                  | ...   | ... | 2   | 2   | 4   | 2   | 2   | 1   | 5   | 3   | 1   | 22        |
| Other Diseases of Heart ... ..                     | ...   | ... | 1   | 2   | 3   | 10  | 11  | 6   | 16  | 8   | 1   | 58        |
| Aneurism ... ..                                    | ...   | ... | ... | ... | ... | ... | 1   | ... | ... | 1   | ... | 2         |
| Embolism, Thrombosis ... ..                        | ...   | ... | ... | ... | ... | 1   | ... | 1   | 1   | 1   | ... | 4         |
| Other Diseases of Blood Vessels ... ..             | ...   | ... | ... | ... | ... | 1   | ... | ... | 2   | ... | ... | 3         |
| 4.—DISEASES OF RESPIRATORY SYSTEM.                 |       |     |     |     |     |     |     |     |     |     |     |           |
| Laryngitis ... ..                                  | 1     | ..  | ... | ... | ... | ... | ... | ... | ... | 1   | ... | 2         |
| Emphysema, Asthma ... ..                           | ...   | ... | ... | ... | ... | ... | 1   | ... | 1   | ... | ... | 2         |
| Bronchitis ... ..                                  | 10    | 23  | ... | ... | 1   | ... | 6   | 13  | 25  | 27  | 7   | 112       |
| Pneumonia ... ..                                   | 7     | 9   | 2   | ... | 2   | 1   | 10  | 5   | 2   | 5   | 2   | 45        |
| Pleurisy ... ..                                    | ...   | ... | ... | ... | 1   | 2   | ... | 1   | ... | ... | ... | 4         |
| Other Diseases of Respiratory System ... ..        | ...   | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | 1         |
| 5.—DISEASES OF DIGESTIVE SYSTEM.                   |       |     |     |     |     |     |     |     |     |     |     |           |
| Dentition ... ..                                   | 2     | 7   | ... | ... | ... | ... | ... | ... | ... | ... | ... | 9         |
| Diseases of Stomach ... ..                         | 1     | ... | ... | ... | 1   | 2   | 2   | 1   | 1   | ... | ... | 8         |
| Enteritis ... ..                                   | 17    | ..  | ... | ... | ... | 1   | ... | ... | 4   | 2   | 1   | 25        |
| Obstructive Diseases of Intestine ... ..           | 1     | ... | ... | ... | ... | 2   | ... | 2   | 5   | 3   | 2   | 15        |
| Peritonitis ... ..                                 | ...   | 1   | ... | ... | 2   | ... | ... | 1   | 1   | ... | ... | 5         |
| Cirrhosis of Liver ... ..                          | ...   | ... | ... | ... | 1   | 1   | 2   | 5   | 1   | 1   | ... | 11        |
| Jaundice and other Diseases of Liver ... ..        | ...   | ... | ... | ... | 1   | 1   | 1   | 1   | 1   | ... | ... | 5         |
| Other Diseases of Digestive System... ..           | ...   | ... | ... | 1   | ... | 1   | ... | ... | ... | ... | ... | 2         |
| 6.—DISEASES OF LYMPHATIC SYSTEM.                   |       |     |     |     |     |     |     |     |     |     |     |           |
| 7.—DISEASES OF GLAND-LIKE ORGANS OF UNCERTAIN USE. |       |     |     |     |     |     |     |     |     |     |     |           |
| 8.—DISEASES OF URINARY SYSTEM.                     |       |     |     |     |     |     |     |     |     |     |     |           |
| Nephritis ... ..                                   | ...   | ... | ... | ... | 1   | ... | 1   | ... | ... | ... | ... | 2         |
| Bright's Disease, Albuminuria ... ..               | ...   | ... | 1   | 1   | ... | 2   | 4   | 1   | 10  | 4   | ... | 23        |
| 9.—DISEASES OF REPRODUCTIVE SYSTEM.                |       |     |     |     |     |     |     |     |     |     |     |           |
| A. Of Organs of Generation.                        |       |     |     |     |     |     |     |     |     |     |     |           |
| Female Organs... ..                                | ...   | ... | ... | 1   | ... | 2   | 2   | 2   | ... | ... | ... | 7         |

## Males.

TABLE III. (continued).

| DISEASES.                                               | AGES. |     |     |     |     |     |     |     |     |     |     | All Ages. |
|---------------------------------------------------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|
|                                                         | 0-    | 1-  | 5-  | 15- | 25- | 35- | 45- | 55- | 65- | 75- | 85- |           |
| LOCAL DISEASES.—Continued.                              |       |     |     |     |     |     |     |     |     |     |     |           |
| 10.—DISEASES OF BONES AND JOINTS.                       |       |     |     |     |     |     |     |     |     |     |     |           |
| Arthritis, Ostitis, Periostitis ... ..                  | 1     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1         |
| 11.—DISEASES OF INTEGUMENTARY SYSTEM.                   |       |     |     |     |     |     |     |     |     |     |     |           |
| VII.—DEATHS FROM VIOLENCE.                              |       |     |     |     |     |     |     |     |     |     |     |           |
| 1.—ACCIDENT OR NEGLIGENCE.                              |       |     |     |     |     |     |     |     |     |     |     |           |
| Fractures and Contusions ... ..                         | 1     | 1   | 3   | 3   | 1   | 2   | 1   | 4   | 1   | 1   | ... | 18        |
| Burn, Scald ... ..                                      | ...   | 3   | ... | ... | 1   | ... | ... | ... | ... | ... | ... | 4         |
| Drowning ... ..                                         | 2     | ... | 1   | ... | 1   | 1   | ... | ... | ... | ... | ... | 5         |
| Suffocation ... ..                                      | 3     | ... | ... | 1   | ... | ... | ... | ... | ... | ... | ... | 4         |
| 2.—HOMICIDE.                                            |       |     |     |     |     |     |     |     |     |     |     |           |
| Murder ... ..                                           | 2     | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2         |
| 3.—SUICIDE.                                             |       |     |     |     |     |     |     |     |     |     |     |           |
| Gunshot Wounds ... ..                                   | ...   | ... | ... | ... | ... | ... | ... | 1   | ... | ... | ... | 1         |
| Poison ... ..                                           | ...   | ... | ... | ... | 1   | ... | ... | ... | ... | ... | ... | 1         |
| Hanging .. ...                                          | ...   | ... | ... | ... | 1   | 1   | 1   | ... | ... | ... | ... | 3         |
| 4.—EXECUTION.                                           |       |     |     |     |     |     |     |     |     |     |     |           |
| VIII.—DEATHS FROM ILL-DEFINED AND NOT SPECIFIED CAUSES. |       |     |     |     |     |     |     |     |     |     |     |           |
| Debility, Atrophy, Inanition ... ..                     | 30    | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 30        |
| Uncertified Death ... ..                                | ...   | ... | ... | ... | ... | ... | ... | ... | 1   | ... | ... | 1         |

TABLE III. (continued).

**Females.**

[illegible]

TABLE V.

Table showing the Number of Deaths from the principal Zymotic Diseases in the Ten Years 1888 to 1897, and in the Year 1898.

| DISEASE.          | 1888.                     | 1889. | 1890. | 1891. | 1892. | 1893. | 1894. | 1895. | 1896. | 1897. | Averages, 1888—97. |                               | 1898.   |                  |
|-------------------|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|-------------------------------|---------|------------------|
|                   |                           |       |       |       |       |       |       |       |       |       | Uncor-<br>rected.  | Corrected<br>and<br>Adjusted. | Deaths. | Death-<br>rates. |
| Smallpox ...      | 1                         | ...   | ...   | ...   | ...   | 4     | 3     | ...   | 1     | ..    | 0·9                | 1                             | ...     | ...              |
| Measles ...       | 66                        | 11    | 77    | 7     | 81    | 30    | 66    | 18    | 103   | 2     | 46·1               | 49                            | 89      | 0·69             |
| Scarlet Fever ... | 14                        | 8     | 6     | 7     | 17    | 30    | 13    | 14    | 22    | 20    | 15·1               | 16                            | 8       | 0·06             |
| Diphtheria ...    | 75                        | 39    | 45    | 27    | 32    | 69    | 92    | 49    | 67    | 65    | 56·0               | 59                            | 64      | 0·50             |
| Whooping Cough    | 74                        | 26    | 82    | 67    | 29    | 59    | 44    | 20    | 47    | 40    | 48·8               | 51                            | 45      | 0·35             |
| Fever. {          | Typhus ...                | ...   | ...   | ...   | ...   | ...   | ...   | ...   | ...   | ...   | ...                | ...                           | ...     | ...              |
|                   | Enteric ...               | 15    | 16    | 10    | 17    | 7     | 19    | 23    | 15    | 14    | 14·2               | 15                            | 17      | 0·13             |
|                   | Simple Con-<br>tinued ... | ...   | 1     | ...   | ...   | ...   | ...   | ...   | 2     | 1     | 0·4                | 0                             | ...     | ...              |
| Diarrhœa ...      | 38                        | 63    | 62    | 76    | 82    | 65    | 45    | 91    | 66    | 107   | 69·5               | 73                            | 92      | 0·72             |
| TOTALS ...        | 283                       | 163   | 283   | 201   | 248   | 276   | 286   | 207   | 322   | 241   | 251·0              | 264                           | 315     | 2·46             |

TABLE VI.  
Report of the Works of the Sanitary Department completed during the Year 1898.

|           |     | No. of Complaints received. |      | Inspections of Dwelling Houses. |       |      |     | Sanitary Works completed in Dwelling Houses. |     |     |    |                   |    |    |    |                             |    |    |    |                        |    |                |     | To Regulate Keeping of Animals.     |    |    |    | Trade Supervision.                       |     |    |  | Foods. |                                  |  |  |  |                        |  |  |  |                     |  |  |  |                      |  |  |  |                        |  |  |  |                                  |  |  |  |                                  |  |  |  |               |  |  |  |               |  |  |  |                  |  |  |  |                               |  |  |  |                          |  |  |  |                                    |  |  |  |                                       |  |  |  |                        |  |  |  |                          |  |  |  |                  |  |  |  |                                |  |  |  |             |  |  |  |                   |  |  |  |                          |  |  |  |
|-----------|-----|-----------------------------|------|---------------------------------|-------|------|-----|----------------------------------------------|-----|-----|----|-------------------|----|----|----|-----------------------------|----|----|----|------------------------|----|----------------|-----|-------------------------------------|----|----|----|------------------------------------------|-----|----|--|--------|----------------------------------|--|--|--|------------------------|--|--|--|---------------------|--|--|--|----------------------|--|--|--|------------------------|--|--|--|----------------------------------|--|--|--|----------------------------------|--|--|--|---------------|--|--|--|---------------|--|--|--|------------------|--|--|--|-------------------------------|--|--|--|--------------------------|--|--|--|------------------------------------|--|--|--|---------------------------------------|--|--|--|------------------------|--|--|--|--------------------------|--|--|--|------------------|--|--|--|--------------------------------|--|--|--|-------------|--|--|--|-------------------|--|--|--|--------------------------|--|--|--|
|           |     |                             |      |                                 |       |      |     | Drainage, &c.                                |     |     |    |                   |    |    |    | Water Supply.               |    |    |    | Dust Receptacles.      |    | Miscellaneous. |     |                                     |    |    |    |                                          |     |    |  |        |                                  |  |  |  |                        |  |  |  |                     |  |  |  |                      |  |  |  |                        |  |  |  |                                  |  |  |  |                                  |  |  |  |               |  |  |  |               |  |  |  |                  |  |  |  |                               |  |  |  |                          |  |  |  |                                    |  |  |  |                                       |  |  |  |                        |  |  |  |                          |  |  |  |                  |  |  |  |                                |  |  |  |             |  |  |  |                   |  |  |  |                          |  |  |  |
|           |     |                             |      | "House-to-House."               |       |      |     | On Complaint or after illness.               |     |     |    | Cellar Dwellings. |    |    |    | Re-inspection of all kinds. |    |    |    | Entire Reconstruction. |    |                |     | Drains trapped and (or) ventilated. |    |    |    | Waste and rain-water pipes disconnected. |     |    |  |        | W.C. New provided, repaired, &c. |  |  |  | Soil-pipes ventilated. |  |  |  | Services Separated. |  |  |  | Supplies Reinstated. |  |  |  | Cisterns New provided. |  |  |  | Cisterns cleansed, repaired, &c. |  |  |  | Cisterns overflow dis-connected. |  |  |  | New provided. |  |  |  | Repaired, &c. |  |  |  | Houses cleansed. |  |  |  | Cases of overcrowding abated. |  |  |  | Cellar-dwellings closed. |  |  |  | Yards and Areas Paved and Drained. |  |  |  | Manure Receptacles Reconstructed, &c. |  |  |  | Accumulations Removed. |  |  |  | Improperly kept Removed. |  |  |  | Slaughterhouses. |  |  |  | Cowhouses, Milkshops, Dairies. |  |  |  | Bakehouses. |  |  |  | Offensive Trades. |  |  |  | Seizure of Unsound Food. |  |  |  |
|           |     |                             |      |                                 |       |      |     |                                              |     |     |    |                   |    |    |    |                             |    |    |    |                        |    |                |     |                                     |    |    |    |                                          |     |    |  |        |                                  |  |  |  |                        |  |  |  |                     |  |  |  |                      |  |  |  |                        |  |  |  |                                  |  |  |  |                                  |  |  |  |               |  |  |  |               |  |  |  |                  |  |  |  |                               |  |  |  |                          |  |  |  |                                    |  |  |  |                                       |  |  |  |                        |  |  |  |                          |  |  |  |                  |  |  |  |                                |  |  |  |             |  |  |  |                   |  |  |  |                          |  |  |  |
| Quarters. | 1.. | 192                         | 19   | 638                             | ..    | 3175 | 89  | 27                                           | 16  | 43  | 21 | 17                | 18 | 6  | 4  | ..                          | 5  | 1  | 6  | 4                      | 3  | 10             | ..  | 4                                   | .. | .. | 29 | 12                                       | 317 | .. |  |        |                                  |  |  |  |                        |  |  |  |                     |  |  |  |                      |  |  |  |                        |  |  |  |                                  |  |  |  |                                  |  |  |  |               |  |  |  |               |  |  |  |                  |  |  |  |                               |  |  |  |                          |  |  |  |                                    |  |  |  |                                       |  |  |  |                        |  |  |  |                          |  |  |  |                  |  |  |  |                                |  |  |  |             |  |  |  |                   |  |  |  |                          |  |  |  |
|           | 2.. | 181                         | 23   | 655                             | ..    | 3241 | 112 | 25                                           | 19  | 54  | 26 | 9                 | 14 | 5  | 10 | ..                          | 4  | 4  | 16 | 5                      | .. | 10             | 1   | 38                                  | 1  | .. | 10 | 34                                       | 276 | .. |  |        |                                  |  |  |  |                        |  |  |  |                     |  |  |  |                      |  |  |  |                        |  |  |  |                                  |  |  |  |                                  |  |  |  |               |  |  |  |               |  |  |  |                  |  |  |  |                               |  |  |  |                          |  |  |  |                                    |  |  |  |                                       |  |  |  |                        |  |  |  |                          |  |  |  |                  |  |  |  |                                |  |  |  |             |  |  |  |                   |  |  |  |                          |  |  |  |
|           | 3.. | 202                         | ..   | 564                             | ..    | 3271 | 118 | 28                                           | 32  | 86  | 29 | 8                 | 6  | 13 | 14 | ..                          | 8  | 1  | 40 | 3                      | .. | 18             | 4   | 52                                  | 1  | .. | 39 | 31                                       | 233 | 1  |  |        |                                  |  |  |  |                        |  |  |  |                     |  |  |  |                      |  |  |  |                        |  |  |  |                                  |  |  |  |                                  |  |  |  |               |  |  |  |               |  |  |  |                  |  |  |  |                               |  |  |  |                          |  |  |  |                                    |  |  |  |                                       |  |  |  |                        |  |  |  |                          |  |  |  |                  |  |  |  |                                |  |  |  |             |  |  |  |                   |  |  |  |                          |  |  |  |
|           | 4.. | 143                         | 33   | 705                             | ..    | 3515 | 123 | 29                                           | 13  | 71  | 31 | 14                | 2  | 4  | 16 | ..                          | 3  | 4  | 24 | 2                      | 8  | 1              | 4   | 9                                   | 5  | 19 | 13 | 15                                       | 266 | .. |  |        |                                  |  |  |  |                        |  |  |  |                     |  |  |  |                      |  |  |  |                        |  |  |  |                                  |  |  |  |                                  |  |  |  |               |  |  |  |               |  |  |  |                  |  |  |  |                               |  |  |  |                          |  |  |  |                                    |  |  |  |                                       |  |  |  |                        |  |  |  |                          |  |  |  |                  |  |  |  |                                |  |  |  |             |  |  |  |                   |  |  |  |                          |  |  |  |
| Year ..   | 718 | 75                          | 2562 | ..                              | 13202 | 442  | 109 | 80                                           | 254 | 107 | 48 | 40                | 28 | 44 | .. | 20                          | 10 | 86 | 14 | 11                     | 39 | 9              | 103 | 7                                   | 19 | 91 | 92 | 1092                                     | 1   |    |  |        |                                  |  |  |  |                        |  |  |  |                     |  |  |  |                      |  |  |  |                        |  |  |  |                                  |  |  |  |                                  |  |  |  |               |  |  |  |               |  |  |  |                  |  |  |  |                               |  |  |  |                          |  |  |  |                                    |  |  |  |                                       |  |  |  |                        |  |  |  |                          |  |  |  |                  |  |  |  |                                |  |  |  |             |  |  |  |                   |  |  |  |                          |  |  |  |

## APPENDIX B.—

## SCARLET FEVER.

| No. | First Patient.     |               | Hospital.                  |                          | Subsequent Cases. |               |                            | Interval (days).    |
|-----|--------------------|---------------|----------------------------|--------------------------|-------------------|---------------|----------------------------|---------------------|
|     | Initials.          | Sex Age.      | Removed to.                | Returned from.           | Initials.         | Sex Age.      | Sickened.                  |                     |
| 1   | L. B.              | f. 6          | 9 xi., '97                 | 1 i., '98                | O. C.             | m. 3          | 8 i., '98                  | 7                   |
| 2   | H. W.              | f. 1          | 23 ix., '97                | 20 xii., '97             | G. W.             | m. 32         | 9 i., '98                  | 20                  |
| 3   | E. S.              | f. 7          | 12 x., '97                 | 31 xii., '97             | H. S.             | m. 3          | 11 i., '98                 | 11                  |
| 4   | A. H.              | m. 7          | 28 x., '97                 | 30 xii., '97             | J. H.             | m. 4          | 11 i., '98                 | 12                  |
| 5   | D. R.<br>K. M.     | f. 9<br>f. 17 | 11 xi., '97<br>16 xi., '97 | 12 i., '98<br>15 i., '98 | F. R.<br>E. R.    | f. 8<br>f. 14 | 19 i., '98<br>21 i., '98   | 7 or 4<br>9, 5 or 2 |
| 6   | J. H.<br>(case 4.) | m. 4          | 13 i., '98                 | 25 iii., '98             | C. H.<br>D. H.    | f. 9<br>f. 1  | 31 iii., '98<br>3 iv., '98 | 6<br>9 or 3         |
| 7   | E. B.              | f. 5          | 18 vii., '98               | 19 x., '98               | E. M. B.          | f. 2          | 29 x., '98                 | 10                  |
| 8   | F. H.              | m. 3          | 5 viii., '98               | 4 xi., '98               | N. H.             | f. 7          | 19 xi., '98                | 15                  |
| 9   | B. B.              | m. 7          | 30 ix., '98                | 1 xii., '98              | M. B.             | f. 10         | 13 xii., '99               | 12                  |

## DIPHTHERIA.

|   |       |       |                                |              |       |       |                            |    |
|---|-------|-------|--------------------------------|--------------|-------|-------|----------------------------|----|
| 1 | E. R. | f. 5  | 18 vii., '98<br>scarlet fever  | 2 xi., '98   | M. R. | f. 11 | 9 xi.<br>diphtheria        | 7  |
| 2 | F. M. | m. 12 | 16 vi., '98                    | 3 xi., '98   | H. M. | m. 3  | 23 xi., '98                | 18 |
| 3 | A. W. | f. 2  | 15 viii., '98<br>scarlet fever | 20 xii., '98 | O. W. | f. 4  | 27 xii., '98<br>diphtheria | 7  |

## RETURN CASES.

| Notes.                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Return case not notified until 17th January—too late for investigation.                                                                                        |
| Notification of return case late—interval over long. Very doubtful case altogether.                                                                            |
| E. S., herself a return case in October, 1897. On return home she had nasal discharge and some scaliness of skin, hardly sufficient to be called desquamation. |
| A. H., congested throat and hard glands in neck on 13th January. Mother had sore throat after A. H.'s return.                                                  |
| D. R. and K. M. return cases themselves. On 22nd January, D. R. desquamating feet and leg (left). K. M. scaly arms and remains of cracked nostrils.            |
| J. H. Mucopurulent discharge from nose on 4th April, with cracks in nostrils and sores on chin: glands of neck hard.                                           |
| E. B., reported to have had some desquamation on legs since return. Harsh, scaly skin, and chronic scurf of head only points noticed.                          |
| F. H., full congested throat, with adenoids.                                                                                                                   |
| B. B., nasal discharge and scaly patch behind ear.                                                                                                             |
| E. R., discharge from ears. Swab from throat, negative.                                                                                                        |
| F. M., throat doubtfully congested: swab from throat negative. Diagnosis of second case somewhat doubtful.                                                     |
| A. W., no indication. Swab from throat negative.                                                                                                               |

